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(Including Cover Sheet)

CORONA "J" FLIGHT DATA BOOK

SYSTEM NO. I-20

VEHICLE NO. 1613

MISSION NO. 1020

CAMERA NOS. 136/137

Prepared by [redacted]

Checked by [redacted]

Approved by [redacted]

Approved by [redacted]

Declassified and Released by the NRO

In Accordance with E. O. 12958

on NOV 26 1997

LOGGED JWP

21 JUN 1965

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SYSTEM NO. 1-20
VEHICLE NO. 1613
MISSION NO. 1020
CAMERA NOS. 136/137

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SYSTEM NO. J-20
VEHICLE NO. 1613
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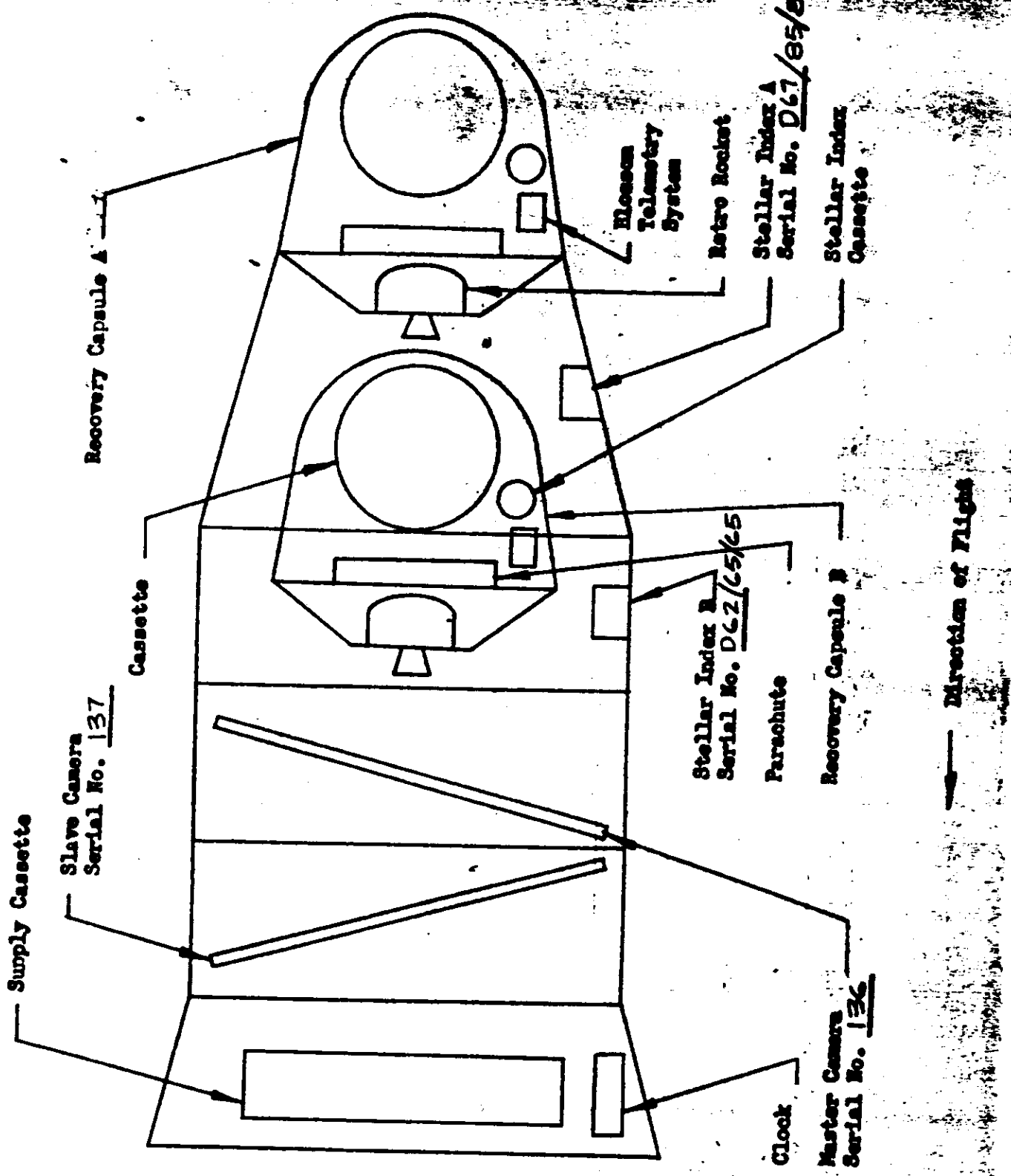
VEHICLE LAYOUT: 1029

NO. [redacted]



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GENERAL FLIGHT DATA:

Master Camera Serial No. 136

Slave Camera Serial No. 137

Stellar Index "A" Serial No. D67/85/80

Stellar Index "B" Serial No. D62/65/65

Launch Date 6-9-65

Reactivation Date N.A.

Reactivation Orbit No. N.A.

Orbital Parameters: (Rev. 48)

Period 89.786 Min. Eccentricity 0.01386

Perigee 97.128 NM Perigee Latitude 40.65 Deg. N

Apogee 196.52 NM Inclination Angle 75.07 Deg.

Recovery Orbit No. 97

Recovery Date 6-15-65

REMARKS:

SYSTEM NO. J-20 N [redacted] Page 5 of 41
VEHICLE NO. 1613
MISSION NO. 1020
CAMERA NOS. 136/137

LENS DATA SUMMARY: Master Camera No. 136

Lens Serial No. 1132435

Slit Width .250 Inch

Filter Type WRATTEN 25

Equivalent Operational Focal Length 609.628 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
Bench Test	261	SO-132	HIGH
Other	143	SO-132	LOW

Dynamic:

Itek [redacted]	178	SO-132	HIGH
Itek [redacted]	128	SO-132	LOW
AP	184	SO-132	HIGH
AP	107	SO-132	LOW
Other			

Note: Itek Post Vibration Resolution of 178 lines/MM Reported In Message No. [redacted] dated 6-9-65

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	3	2	1	0	359	358	357		
Distortion Millimeters	.000	.000	.000	.000	.000	.000	.000		

LENS DATA SUMMARY: (Horizon Cameras for [redacted] Camera No. 136)

	Take-Up	Supply
Lens Serial No.	814017	813518
Exposure Time	1/100 Sec.	1/100 Sec.
Filter Type	WRATTEN 25	WRATTEN 25
Aperture	F8.0	F6.8
Operational Focal Length	54.84 MM	54.37 MM
Radial Distortion:		
10° off Axis	.004 MM	.009 MM
20° off Axis	.016 MM	.013 MM
Tangential Distortion (Maximum Vector)	.004 MM	.003 MM

Resolution:

Angle off Axis Deg.	0	5	10	15	20	25	27.5	0	5	10	15	20	25	27.5
Radial Resolution	170		112	69	80	87	59	116	116	91	67	62	74	69
Tangential Resolution	170		116	89	84	67	42	116	115	89	65	64	53	41

95 Lines/MM Avg. 81 Lines/MM Avg.

Note:

1. Distortion and resolution are read at equivalent operational focal length.
2. Resolution in lines per mm on SO-132 film and HIGH contrast target.

VEHICLE NO. 1613

MISSION NO. 1020

CAMERA NOS. 136/137

LENS DATA SUMMARY: Slave Camera No. 137

Lens Serial No. 142435

Slit Width .175 Inch

Filter Type WRATTEN 21

Equivalent Operational Focal Length 609.539 MM

Resolution:

Static:

	Lines/MM	Film Type	Target Contrast
Bench Test	245	SO-132	HIGH
Other	152	SO-132	LOW

Dynamic:

Itek [redacted]	201	SO-132	HIGH
Itek [redacted]	129	SO-132	LOW
AP	194	SO-132	HIGH
AP	102	SO-132	LOW
Other			

NOTE: Itek Post Vibration Resolution of 201 lines/MM Reported In Message No. [redacted] dated 6-9-65.

Distortion - Positive (Pincushion)

Angle Off Axis Deg.	3	2	1	0	359	358	357		
Distortion Millimeters	.003	.002	.000	.000	.000	.002	.003		

[redacted]

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VEHICLE NO. 1613 NO. [redacted]

MISSION NO. 1020

CAMERA NOS. 136/137

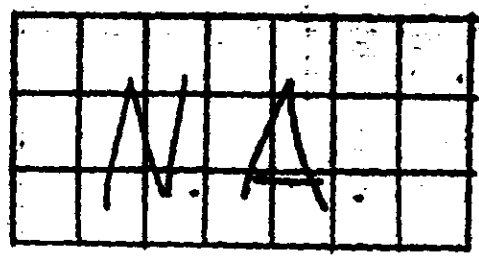
LENS DATA SUMMARY: (Horizon Cameras for SLAVE Camera No. 137)

	Take-Up	Supply
Lens Serial No.	812303	812278
Exposure Time	1/100 Sec.	1/100 Sec.
Filter Type	WRATTEN 25	WRATTEN 25
Aperture	F6.8	F8.0
Operational Focal Length	54.90 MM	54.90 MM
Radial Distortion:		
10° off Axis	.059 MM	-.013 MM
20° off Axis	.106 MM	-.031 MM
Tangetial Distortion (Maximum Vector)	.004 MM	.002 MM

Resolution:

Angle off Axis Deg.	0	5	10	15	20	25	27.5
Radial Resolution	184	173	172	141	130	118	91
Tangetial Resolution	184	172	160	129	97	64	50

N/A



133 Lines/MM Avg. N/A Lines/MM Avg.

NOTE:

1. Distortion and resolution are read at equivalent operational focal length.

2. Resulution in lines per MM on SO-132 film and HIGH contrast target.

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SYSTEM NO. J-20

VEHICLE NO. 1613

MISSION NO. 1020

CAMERA NOS. 136/137

TOP SECRET [redacted]

NO. [redacted]

LENS DATA SUMMARY STELLAR INDEX D67/85/80 : A MISSION

	Stellar		Index	
Lens Serial No.	10519		817456	
Reseau Serial No.	80		85	
Filter Type	NONE		WRATTEN 21	
Aperture	F1.8		F4.5	
Exposure Time	2.0	Sec.	1/500	Sec.
Equivalent Focal Length	84	MM	38.52	MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM High Contrast	93/104	101/101	113/83	93/40	85/17

NOTE: Index Resolution of 72.67 Lines/MM AWAR

Read From 50 - 130 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogeniometer Data Reduction.

Alignment:

0.0007 "/.937 Inches -0.0005 "/2.29 Inches

[redacted]

NO [redacted]

LENS DATA SUMMARY STELLAR INDEX D62/65/65 : B MISSION

	Stellar		Index	
Lens Serial No.	10733		817458	
Reseau Serial No.	65		65	
Filter Type	NONE		WRATTEN 21	
Aperture	F1.8		F4.5	
Exposure Time	2.0	Sec.	1/500	Sec.
Equivalent Focal Length	.85	MM	38.57	MM

Resolution:

Angle Off Axis	0	10	20	30	35
Resolution L/MM High Contrast	74/74	78/81	101/88	104/42	91/28

NOTE: Index Resolution of 73.8 Lines/MM AWAR
Read From SO-130 Film.

Distortion:

All distortions less than maximum allowable. Full Data to be reported as part of Photogoniometer Data Reduction.

Alignment:

.0005 "/.937 Inches .0009 "/2.25 Inches

DEFINITION OF PANORAMIC CAMERA FOCAL CALIBRATIONS

1.0 Measurements are made with respect to collimator targets fixed with respect to the mechanical interface between the total payload assembly and the orbit vehicle.

2.0 Two sets of three targets each, are aligned to be coplanar within ±5" of arc so positioned to form an angle of 35.00° ±5" to the mechanical interface for master camera calibrations and an angle of 15.00°±5" to the mechanical interface for slave camera calibrations.

2.1 One target, Target 1 of each set is imaged on the Terrain format.

2.2 The second and third targets of each set are at angles of 75.00° ±5" from target one and are imaged on the horizon formats.

3.0 The indicated center of format for the panoramic cameras is given by the intersection of a line through the center of mass of the central shrinkage marker drawn normal to the edge of format containing the shrinkage marker and a line parallel to the same edge located at a position half-way between the format edges.

4.0 The indicated principal points of the horizon cameras are the points of intersection of lines joining opposite fiducials.

5.0 Xvo and Yvo are the offsets of Target 1 from the indicated center of format of the panoramic cameras as defined in Paragraph 3.

6.0 Xs, Ys and Xt, Yt are the offsets of Targets 2 and 3 from the indicated principal points of the supply and take-up horizon cameras respectively.

7.0 The indicated flight direction is the direction of vehicle travel during exposure. The forward edge of format is the edge opposite the shrinkage markers for the master camera and is the edge containing the shrinkage markers for the slave camera.

8.0 Dimensions A, B and C are the spacings of the shrinkage markers and dimensions D and E are the spacings of the Y Axis fiducials. Techniques for exact measurement of these dimensions have not been developed. The figures quoted are measurements made on hand processed film without control of shrinkage.

9.0 The format dimensions are measured to the best estimate of format edge.

10.0 Measurement of the angle between the indicated axis of the panoramic cameras and the line of intersection of the plane defined in Paragraph 2 on the format is obtained from the offset dimensions Dax and Day of Target 1 for each camera.

11.0 Measurement of the angle between the indicated axis of the horizon cameras and the line of intersection of the plane defined in Paragraph 2 on the format is made by measuring the scan direction offset of the targets defined in Paragraph 2.2 at a fixed distance from the target center in the Y direction. Dimensions Dtx, Dty, Dsx and Dsy are the offsets of these measurements.

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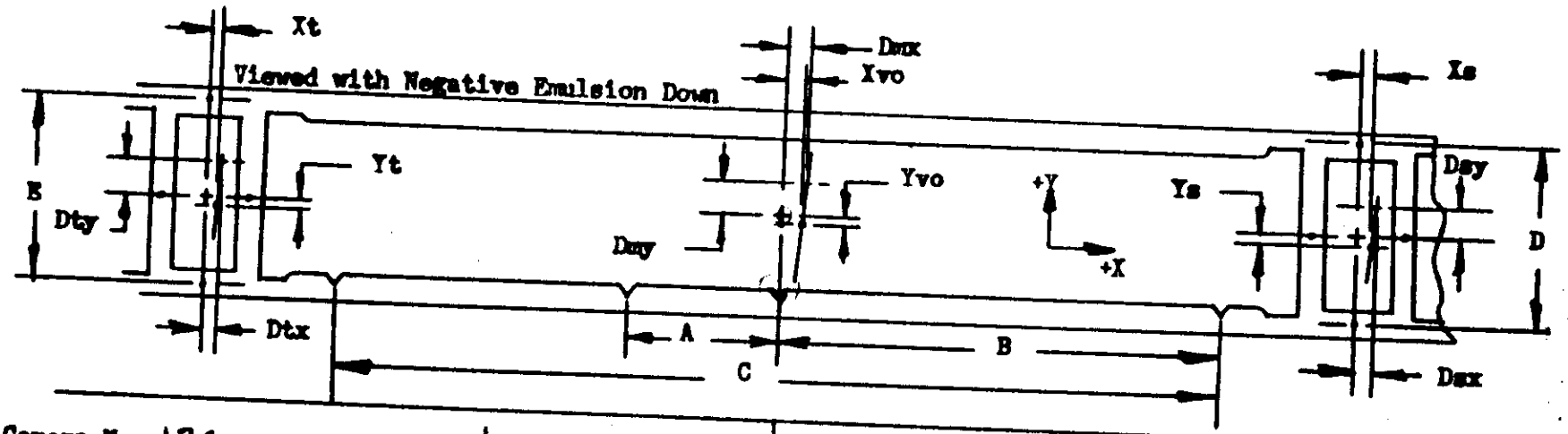
FORMAT DIMENSIONS: (PANORAMIC CAMERAS)

NO. [redacted]



Camera No. 136		Vehicle Motion ↓		Scan Direction →	
A	76.175	Xt	+0.174	Dtx	+0.169
B	354.916	Yt	-0.161	Dty	+2.839
C	710.009	Xs	-0.290	Dsx	-0.290
D	56.433	Ys	+0.030	Dsy	-2.970
E	56.453	Xvo	+0.267	Dmx	+0.267
		Yvo	+1.435	Dmy	+11.435

Format Dimensions:

	Panoramic	Take-Up	Supply
Height	N/A	N/A	N/A
Width	N/A	N/A	N/A

Camera No. 137		Vehicle Motion ↓		Scan Direction →	
A	76.073	Xt	-0.071	Dtx	-0.053
B	354.941	Yt	+0.098	Dty	+2.098
C	709.856	Xs	+0.226	Dsx	+0.221
D	56.461	Ys	-0.173	Dsy	-3.173
E	56.470	Xvo	+0.022	Dmx	+0.036
		Yvo	+0.958	Dmy	+10.958

Format Dimensions:

	Panoramic	Take-Up	Supply
Height	N/A	N/A	N/A
Width	N/A	N/A	N/A

Note: 1. All dimensions are in millimeters and are average dimensions of three formats.
2. Height of main format is taken at center of format.
3. Dt, Dm, Ds, X and Y dimensions are taken 10MM above point defining target center.
4. Format Sign Convention

-X+Y	+X+Y
-X-Y	+X-Y

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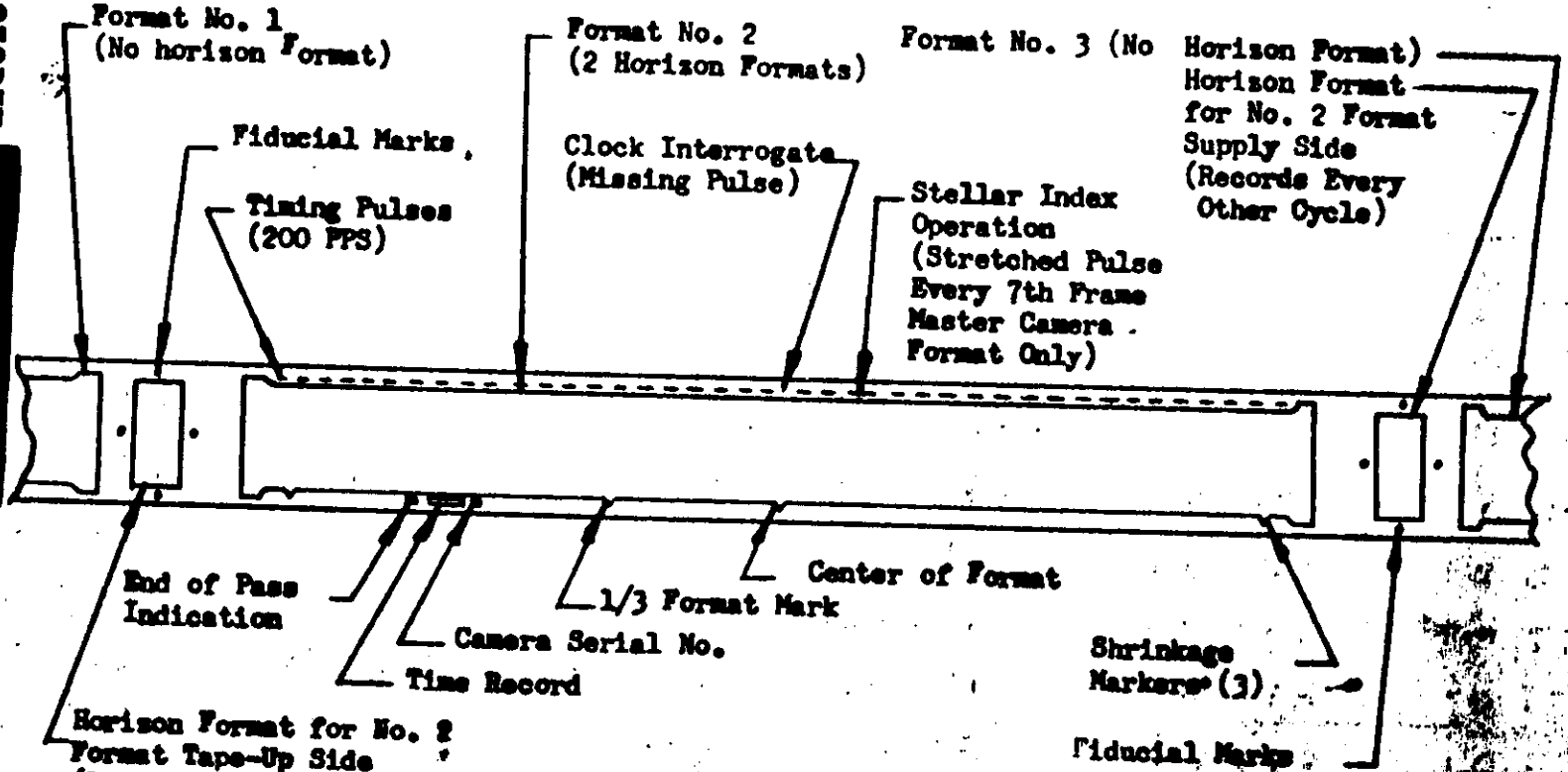

Panoramic Camera No. 136

Viewed With Negative Emulsion Down

Direction of Film Transport

Direction of Scan

Direction of Vehicle Motion

Panoramic Camera No. 137

Viewed With Negative Emulsion Down

Direction of Film Transport

Direction of Scan

Direction of Vehicle Motion

SYSTEM NO. [redacted]
CAMERA NOS. 136/137

TOP SECRET

NO

FORMAT LAYOUT (PANORAMIC CAMERA)

FIG. 13 P. 41

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SYSTEM NO. 1220 NC
VEHICLE NO. 1613
MISSION NO. 1020
CAMERA NOS. 136/137

LENS SETTINGS AND FILM TYPES:

Panoramic Camera Settings:	Camera No. 136	Camera No. 137
Panoramic Optics Slit Width	.250 in.	.175 in.
Panoramic Optics Filter Type	WRATTEN 25	WRATTEN 21
Horizon Optics Exp. Time	1/100 sec.	1/100 sec.
Horizon Optics Aperture	F6.3 SUPPLY F8.0 TAKE-UP	F8.0 SUPPLY F6.3 TAKE-UP
Horizon Optics Filter Type	WRATTEN 25	WRATTEN 25

Stellar Index Camera Settings:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Exposure Time	2.0	1/500	2.0	1/500
Aperture Setting	F1.8	F4.5	F1.8	F4.5
Filter Type	NONE	WRATTEN 21	NONE	WRATTEN 21

Ratio: One Stellar Index Frame Per 7 Master Camera Frames.

Film:

Panoramic Cameras:	Camera No. 136	Camera No. 137
Type	SO-132	SO-132
Length	16000 ft.	16000 ft.
Splices	4	4
Emul. Data	27-18-17-5-5	207-6-5-5

Stellar Index Cameras:

	Stellar Index A		Stellar Index B	
	Stellar	Index	Stellar	Index
Type	SO-102	SO-130	SO-102	SO-130
Emul. Data	54-7-9-4	31-4-9-4	54-2-9-4	31-4-9-4

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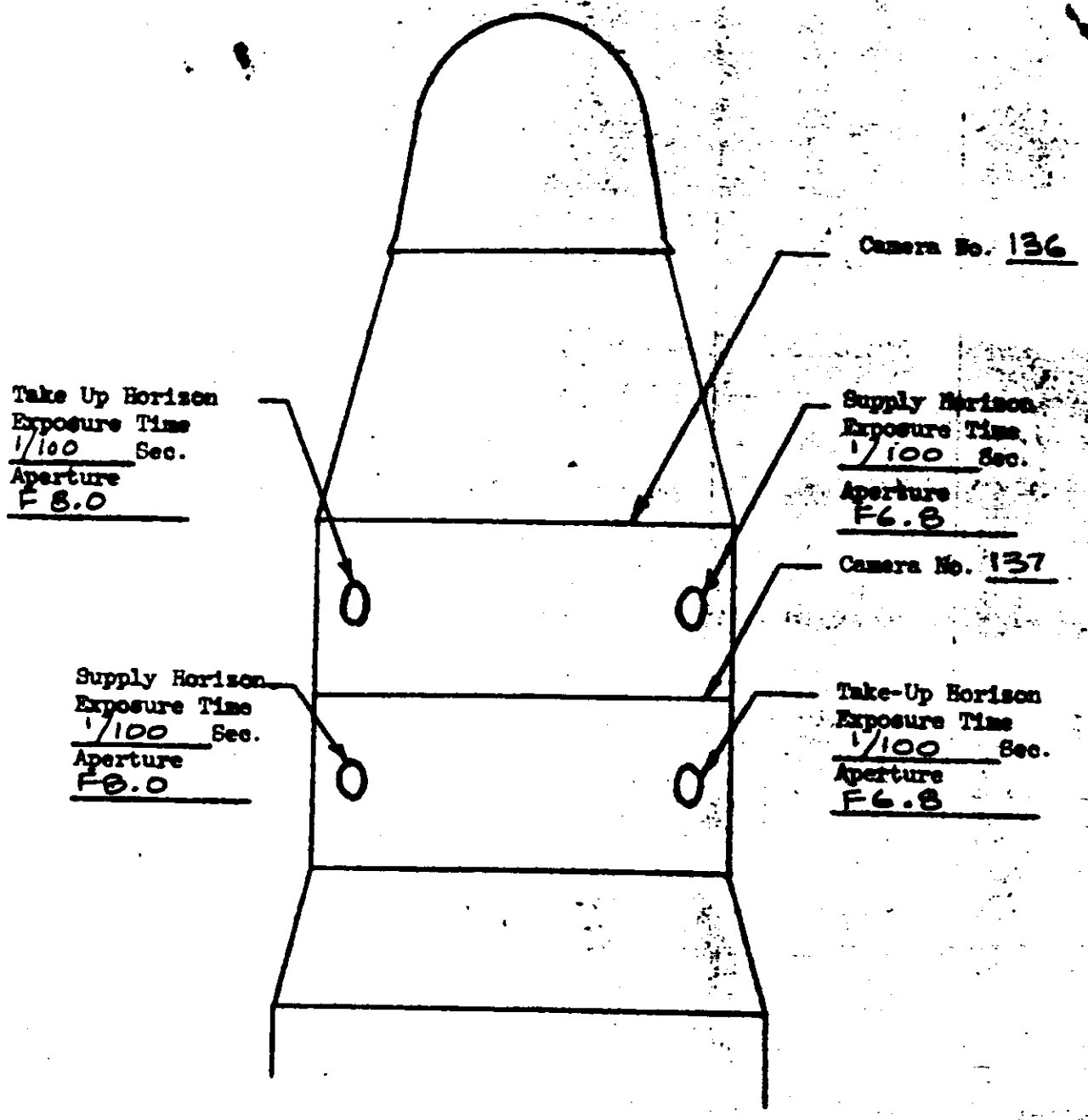
[redacted]



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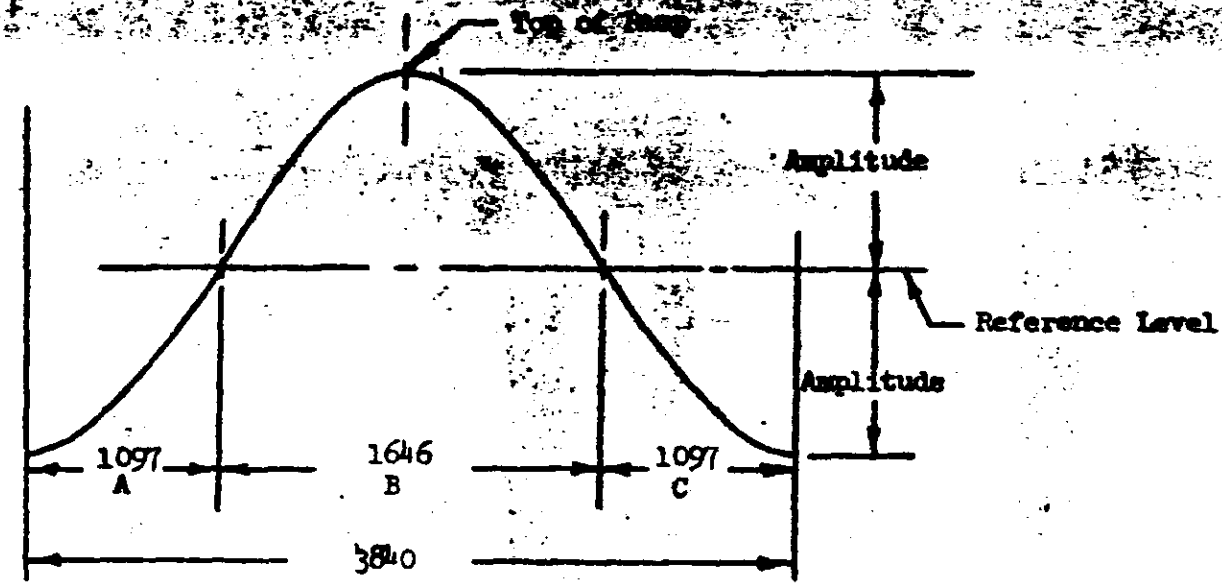
V/H RAMP CONFIGURATION AND CONSTANTS:



Cycle Rate Computation:

A. 0 to 1097 Sec Up Ramp: CPS = R+A Sin (1.5 X -1.5707963)

B. 1097 to 2743 Sec Up Ramp: CPS = R+A Sin (2 X -2.0943951) $\leq$ .4625

C. 2743 to 3840 Sec Up Ramp: CPS = R+A Sin (1.5 X -0.7853982)

FMC Rate Computation:

FMC Rate (In/Sec) = $2\pi \left(\frac{0.3223}{CP}\right)$ = 2.02507 x CPS

FMC Rate (Radians/Sec) = $2\pi \left(\frac{0.3224}{24\ CP}\right)$ = 0.84378 x CPS

Scan Velocity Computation:

Scan Velocity (In/Sec) = $\frac{48\pi}{CP}$ = 150.796 x CPS

Scan Velocity (Radians/Sec) = $\frac{48\pi}{24\ CP}$ = 6.28319 x CPS

Exposure Time (Milliseconds) = $1000 \left(\frac{CP \times SLIT}{48\pi}\right)$ = $6.63146 \left(\frac{SLIT}{CPS}\right)$

WHERE: $X = \frac{\text{Time Up Ramp (Seconds)}}{1047.6942}$ $R = \frac{1}{2}$ (CPS(top) + CPS(bottom))

$A = \frac{1}{2}$ (CPS top - CPS bottom) CP = Camera Cycle Period in Sec/Cycle

CPS = Camera Cycle Rate in Cycles/Sec

SLIT = Slit Width in Inches

[redacted]

CYCLE PERIOD DATA:

PRE-FLIGHT CYCLE PERIODS:

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Time Up Ramp Sec
		Master	Slave	
R6	A5	3.762	3.767	280
R6	A5	2.217	2.228	1774
R6	A4	3.900	3.903	345
R6	A4	2.211	2.220	1858
R5	A4	3.618	3.625	398
R5	A4	2.204	2.210	1895
R5	A4	3.574	3.581	435
R5	A4	2.239	2.236	2002
R5	A4	2.226	2.249	2037
R5	A4	2.207	2.214	2080

IN-FLIGHT CYCLE PERIODS

V/H Ramp Level	V/H Ramp Amplitude	Cycle Period Seconds		Orbit No.	Time Up Ramp Sec
		Master	Slave		
R6	A5	3.815	3.813	9	280
R6	A5	2.280	2.252	16	1774
R6	A4	3.932	3.931	25	345
R6	A4	2.246	2.249	32	1858
R5	A4	3.682	3.685	41	398
R5	A4	2.250	2.240	48	1895
R5	A4	3.680	3.675	57	435
R5	A4	2.239	2.236	63	2002
R5	A4	2.226	2.249	79	2037
R6	A4	2.248	2.248	95	2080

5 4 95

A. 1020-1 LAUNCH 2158Z 6-9-65
B. DRY
C. PERFORMANCE ESTIMATE, PART1

OPERATIONS SUMMARY
FWD PAN CAMERA NUMBER 136

OPN	NO	FRA		Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM
PRE-FLT		101												
1	2	0	15 ON	2	52 20	152 08W	627493	650331	09	23	27	08	1318	84428
			OFF	2	49 56	150 34W	620184	642747	09	23	27	47	1325	84467
2	2	1	34 ON	2	65 27	170 36E	678456	703212	10	00	53	16	1215	03196
			OFF	2	60 14	178 09E	655342	679227	10	00	54	49	1247	03289
6	2	1	25 ON	2	54 48	092 41E	632911	655953	10	06	55	49	1306	24949
			OFF	2	50 53	095 29E	620628	643208	10	06	56	52	1318	25012
6	2	2	50 ON	2	40 09	100 55E	595371	617005	10	06	59	41	1343	25181
			OFF	2	32 33	103 38E	585168	606421	10	07	01	38	1356	25298
7	8	1	99 ON	2	57 43	067 27E	642606	666012	10	08	24	52	1254	30292
			OFF	2	42 12	077 24E	598939	620707	10	08	29	01	1338	30541
7	8	2	45 ON	2	24 44	083 12E	581705	602828	10	08	33	29	1406	30809
			OFF	2	18 08	084 50E	584678	605912	10	08	35	09	1414	30909
8	5	1	85 ON	2	64 40	035 58E	670396	694847	10	09	52	43	1216	35563
			OFF	2	52 08	049 19E	623436	646122	10	09	56	16	1313	35776
9	5	0	12 ON	1	39 51	115 11W	974260	1010322	10	11	05	25	0324	39925
			OFF	1	42 45	113 58W	960727	996265	10	11	06	12	0330	39972
10	2	1	60 ON	3	00 46	020 51E	624252	646967	10	13	09	29	1432	47369
			OFF	3	10 19	022 49E	660199	684265	10	13	11	53	1443	47513
11	4	1	30 ON	2	24 57	007 30W	581734	602858	10	14	32	52	1402	52372
			OFF	2	20 22	006 20W	583402	604589	10	14	34	01	1408	52441
11	4	2	37 ON	2	14 58	005 05W	588696	610080	10	14	35	23	1414	52523
			OFF	2	09 24	003 53W	597944	619674	10	14	36	47	1421	52607
16	5	0	16 ON	2	37 45	124 46W	591899	613404	10	21	58	50	1339	79130
			OFF	2	35 21	123 55W	589053	610451	10	21	59	27	1343	79167
18	7	1	73 ON	2	72 24	147 06E	707835	733700	11	00	48	26	1036	02906
			OFF	2	63 23	171 24E	660013	684073	11	00	51	35	1217	03095
22	1	1	65 ON	2	57 48	087 27E	636857	660046	11	06	52	32	1242	24752
			OFF	2	48 19	094 26E	609848	632025	11	06	55	06	1312	24906
22	1	2	53 ON	2	42 50	097 11E	598550	620303	11	06	56	32	1325	24992
			OFF	2	35 14	100 09E	588225	609592	11	06	58	30	1339	25110
22	1	3	31 ON	2	25 54	102 58E	584506	605734	11	07	00	52	1352	25252
			OFF	2	21 17	104 09E	586457	607758	11	07	02	02	1358	25322
22	1	4	22 ON	3	05 55	109 59E	649957	673637	11	07	08	53	1428	25733
			OFF	3	09 35	110 44E	665012	689258	11	07	09	49	1432	25789
23	8	1	65 ON	2	57 59	064 37E	636922	660114	11	08	22	19	1240	30139
			OFF	2	48 30	071 40E	609940	632120	11	08	24	53	1311	30293
23	8	2	38 ON	2	35 02	077 34E	587945	609302	11	08	28	23	1338	30503
			OFF	2	29 31	079 18E	584743	605979	11	08	29	47	1347	30587
24	6	1	102 ON	2	60 59	038 41E	647001	670572	11	09	51	18	1226	35478
			OFF	2	46 33	050 05E	605254	627258	11	09	55	14	1315	35714
25	6	0	12 ON	1	38 16	118 22W	960190	995707	11	11	02	28	0308	39748
			OFF	1	41 11	117 13W	946761	981759	11	11	03	15	0314	39795
26	7	1	58 ON	2	17 13	014 29E	591062	612534	11	13	02	22	1400	46942
			OFF	2	08 33	016 23E	606470	628519	11	13	04	33	1410	47073

26	7	2	117	ON	2	01	16	017	55E	626526	649119	11	13	06	23	1417	47183
				OFF	3	18	17	022	02E	708604	734495	11	13	11	19	1439	47479
30	5	1	20	ON	2	40	23	083	00W	593044	614591	11	18	55	46	1323	68146
				OFF	2	37	21	081	50W	589412	610824	11	18	56	33	1329	68193
30	5	2	24	ON	2	23	C0	077	30W	586302	607597	11	19	00	12	1350	68412
				OFF	2	19	23	076	37W	589320	610727	11	19	01	07	1354	68467
32	5	0	17	ON	2	37	57	127	22W	589799	611225	11	21	56	01	1326	78961
				OFF	2	35	28	126	28W	587485	608825	11	21	56	39	1330	78999
39	2	1	24	ON	2	58	20	061	49E	630433	653381	12	08	19	15	1226	29955
				OFF	2	54	59	064	49E	620668	643250	12	08	20	10	1239	30010
39	2	2	24	ON	2	52	24	066	46E	613959	636290	12	08	20	53	1247	30053
				OFF	2	48	54	068	59E	605972	628003	12	08	21	49	1257	30109
40	3	1	31	ON	2	59	21	038	06E	633237	656291	12	09	48	46	1221	35326
				OFF	2	54	59	042	10E	620326	642895	12	09	49	59	1238	35399
40	3	2	21	ON	2	52	22	044	08E	613565	635881	12	09	50	41	1247	35441
				OFF	2	49	24	046	02E	606796	628858	12	09	51	28	1255	35488
40	3	3	38	ON	2	42	51	049	25E	595043	616665	12	09	53	11	1310	35591
				OFF	2	37	24	051	37E	588714	610100	12	09	54	35	1321	35675
41	3	0	13	ON	1	38	21	120	47W	939459	974174	12	10	59	29	0256	39569
				OFF	1	41	17	119	38W	926011	960207	12	11	00	16	0301	39616
48	4	0	17	ON	2	38	01	129	47W	588958	610353	12	21	52	46	1313	78766
				OFF	2	35	31	128	53W	587300	608633	12	21	53	24	1317	78804
49	4	1	38	ON	2	71	C6	170	49E	676260	700933	12	23	13	08	1036	83588
				OFF	2	66	43	176	42W	655400	679287	12	23	14	41	1127	83681
52	5	1	24	ON	2	45	48	136	15E	597769	619493	13	03	49	53	1254	13793
				OFF	2	42	17	137	54E	592958	614502	13	03	50	48	1302	13848
53	5	1	24	ON	2	40	48	115	53E	591261	612742	13	05	20	57	1304	19257
				OFF	2	37	16	117	15E	588348	609720	13	05	21	51	1310	19311
53	5	2	65	ON	2	33	51	118	26E	586808	608122	13	05	22	44	1316	19364
				OFF	2	24	17	121	13E	589417	610829	13	05	25	10	1330	19510
54	5	1	155	ON	2	49	26	088	58E	603669	625615	13	06	48	28	1244	24508
				OFF	2	26	56	097	52E	587826	609177	13	06	54	16	1325	24856
55	2	1	53	ON	2	56	56	060	48E	620365	642936	13	08	16	13	1219	29773
				OFF	2	49	31	066	17E	603593	625536	13	08	18	13	1243	29893
55	2	2	21	ON	2	47	C2	067	40E	599267	621047	13	08	18	53	1249	29933
				OFF	2	44	00	069	11E	594807	616420	13	08	19	41	1256	29981
57	9	0	13	ON	1	38	C9	123	13W	920328	954305	13	10	55	59	0243	39359
				OFF	1	41	11	122	C1W	906532	939977	13	10	56	48	0248	39408
57	9	1	29	ON	1	75	C3	046	50W	711006	736990	13	11	08	34	0801	40114
				OFF	2	74	C1	027	30W	691688	716943	13	11	09	52	0919	40192
57	9	2	49	ON	2	C9	13	C34	07E	616475	638899	13	11	28	03	1344	41283
				OFF	2	C1	38	035	41E	639437	662722	13	11	29	58	1352	41398
57	9	3	45	ON	3	C3	46	036	47E	659651	683696	13	11	31	20	1358	41480
				OFF	3	11	16	038	20E	692563	717849	13	11	33	14	1406	41594
58	3	1	78	ON	2	35	22	C04	43E	587514	608854	13	12	51	12	1310	46272
				OFF	2	23	51	008	07E	590861	612326	13	12	54	08	1326	46448
63	4	1	34	ON	2	35	21	108	28W	587427	608764	13	20	20	00	1306	73200
				OFF	2	30	19	106	51W	587458	608796	13	20	21	17	1313	73277
65	5	1	33	ON	2	68	31	176	46E	653919	677751	13	23	10	21	1057	83421
				OFF	2	64	32	174	56W	638858	662123	13	23	11	38	1131	83498
68	2	1	52	ON	2	49	46	131	48E	601031	622878	14	03	45	01	1232	13501
				OFF	2	42	15	135	40E	591266	612747	14	03	46	59	1249	13619
70	3	1	24	ON	2	42	29	090	17E	591303	612785	14	06	46	25	1247	24385
				OFF	2	38	56	091	45E	588739	610125	14	06	47	20	1254	24440
71	4	1	20	ON	2	70	11	036	01E	657846	681825	14	08	08	15	1032	29295

			OFF	2	67	49	042	43E	641722	671321	14	08	09	05	1059	29345
71	4	2	31 ON	2	54	23	060	43E	608991	631135	14	08	13	01	1215	29581
			OFF	2	49	57	063	46E	600713	622547	14	08	14	12	1229	29652
71	4	3	24 ON	2	47	27	065	13E	596911	618603	14	08	14	52	1235	29692
			OFF	2	43	57	066	59E	592640	614172	14	08	15	47	1243	29747
71	4	4	59 ON	2	38	01	069	27E	588277	609646	14	08	17	19	1255	29839
			OFF	2	29	28	072	16E	588550	609929	14	08	19	30	1308	29970
72	9	1	35 ON	2	57	24	035	30E	615437	637823	14	09	41	56	1203	34916
			OFF	2	52	33	039	26E	605087	627085	14	09	43	15	1221	34995
72	9	2	56 ON	2	50	20	040	54E	601122	622971	14	09	43	51	1227	35031
			OFF	2	42	23	045	03E	591050	612523	14	09	45	56	1246	35156
73	6	1	70 ON	2	00	C0	033	48E	652603	676383	14	11	26	25	1341	41185
			OFF	3	11	31	036	11E	702667	728334	14	11	29	20	1354	41360
75	2	1	24 ON	2	64	54	041	55W	635260	658390	14	14	08	59	1121	50939
			OFF	2	61	43	037	09W	625535	648300	14	14	09	56	1141	50996
79	3	1	33 ON	2	34	46	110	26W	587637	608982	14	20	16	02	1254	72962
			OFF	2	30	15	109	01W	588916	610309	14	20	17	11	1301	73031
84	8	1	47 ON	2	60	38	120	28E	618782	641293	15	03	37	48	1139	13068
			OFF	2	54	16	126	34E	604828	626817	15	03	39	34	1205	13174
84	8	2	54 ON	2	48	43	130	16E	596052	617712	15	03	41	03	1222	13263
			OFF	2	41	C7	134	00E	589014	610411	15	03	43	02	1239	13382
85	8	1	73 ON	2	39	42	111	57E	588262	609631	15	05	13	07	1240	18787
			OFF	2	29	09	115	30E	590089	611525	15	05	15	49	1257	18949
86	2	1	24 ON	2	42	27	088	09E	589573	610990	15	06	42	08	1234	24128
			OFF	2	38	58	089	36E	587942	609298	15	06	43	02	1241	24182
86	2	2	34 ON	2	32	03	092	00E	588450	609825	15	06	44	48	1252	24288
			OFF	2	26	58	093	29E	592071	613581	15	06	46	05	1300	24365
86	2	3	24 ON	2	C7	10	098	06E	633159	656208	15	06	51	05	1323	24665
			OFF	2	03	08	098	56E	646742	670301	15	06	52	06	1327	24726
87	7	1	21 ON	2	70	17	033	34E	648525	672153	15	08	03	54	1018	29034
			OFF	2	67	53	040	25E	639060	662332	15	08	04	45	1046	29085
87	7	2	103 ON	2	56	56	056	26E	609007	631152	15	08	08	00	1153	29280
			OFF	2	42	30	065	3CE	589476	610890	15	08	11	50	1233	29510
88	5	1	55 ON	2	61	C1	029	30E	617921	640401	15	09	36	35	1134	34595
			OFF	2	53	36	036	33E	602342	624238	15	09	38	38	1204	34718
95	7	0	17 ON	2	38	49	113	59W	587412	608749	15	20	10	29	1234	72629
			OFF	2	36	18	113	03W	587422	608759	15	20	11	08	1238	72668

OPERATIONS SUMMARY
AFT PAN CAMERA NUMBER 137

OPN	NO	FRA	Q	LAT	LONG	HEIGHT	RANGE	DA	H	M	S	LTIM	S-TIM
PRE-FLT		101											
1	2	0 15 ON	2	53	11 152 47W	627493	650331	09	23	27	08	1315	84428
		OFF	2	50	47 151 09W	620184	642747	09	23	27	47	1323	84467
2	2	1 34 ON	2	66	14 169 03E	678456	703212	10	00	53	16	1209	03196
		OFF	2	61	C3 177 06E	655342	679227	10	00	54	49	1243	03289
6	2	1 25 ON	2	55	38 091 57E	632911	655953	10	06	55	49	1303	24949
		OFF	2	51	43 094 53E	620628	643208	10	06	56	52	1316	25012
6	2	2 5C ON	2	40	58 100 32E	595371	617005	10	06	59	41	1341	25181
		OFF	2	33	22 103 19E	585168	606421	10	07	01	38	1354	25298
7	8	1 99 ON	2	58	33 066 34E	642606	666012	10	08	24	52	1251	30292
		OFF	2	43	C1 076 58E	598939	620707	10	08	29	01	1336	30541
7	8	2 45 ON	2	25	33 082 56E	581705	602828	10	08	33	29	1405	30809
		OFF	2	18	57 084 35E	584678	605912	10	08	35	09	1413	30909
8	5	1 85 ON	2	65	27 034 32E	670396	694847	10	09	52	43	1210	35563

			OFF	2	52	58	048	41E	623436	646122	10	09	56	16	1311	35776
9	5	0	12 ON	1	38	30	115	48W	974260	1010322	10	11	05	25	0322	39925
			OFF	1	41	25	114	38W	960727	996265	10	11	06	12	0327	39972
10	2	1	60 ON	3	00	06	020	37E	624252	646967	10	13	09	29	1431	47369
			OFF	3	09	22	022	34E	660199	684265	10	13	11	53	1442	47513
11	4	1	30 ON	2	25	47	007	46W	581734	602858	10	14	32	52	1401	52372
			OFF	2	21	12	006	36W	583402	604589	10	14	34	01	1407	52441
11	4	2	37 ON	2	15	48	005	20W	588696	610080	10	14	35	23	1414	52523
			OFF	2	10	15	004	07W	597944	619674	10	14	36	47	1420	52607
16	5	0	16 ON	2	38	34	125	08W	591899	613404	10	21	58	50	1338	79130
			OFF	2	36	11	124	15W	589053	610451	10	21	59	27	1342	79167
18	7	1	73 ON	2	72	55	144	04E	707835	733700	11	00	48	26	1024	02906
			OFF	2	64	10	170	07E	660013	684073	11	00	51	35	1212	03095
22	1	1	65 ON	2	58	37	086	34E	636857	660046	11	06	52	32	1238	24752
			OFF	2	49	09	093	54E	609848	632025	11	06	55	06	1310	24906
22	1	2	53 ON	2	43	40	096	45E	598550	620303	11	06	56	32	1323	24992
			OFF	2	36	03	099	49E	588225	609592	11	06	58	30	1337	25110
22	1	3	31 ON	2	26	43	102	42E	584506	605734	11	07	00	52	1351	25252
			OFF	2	22	06	103	54E	586457	607758	11	07	02	02	1357	25322
22	1	4	22 ON	3	04	59	109	44E	649957	673637	11	07	08	53	1427	25733
			OFF	3	08	38	110	29E	665012	689258	11	07	09	49	1431	25789
23	8	1	65 ON	2	58	48	063	44E	636922	660114	11	08	22	19	1237	30139
			OFF	2	49	20	071	08E	609940	632120	11	08	24	53	1309	30293
23	8	2	38 ON	2	35	51	077	14E	587945	609302	11	08	28	23	1337	30503
			OFF	2	30	21	079	00E	584743	605979	11	08	29	47	1345	30587
24	6	1	102 ON	2	61	47	037	36E	647001	670572	11	09	51	18	1221	35478
			OFF	2	47	23	049	35E	605254	627258	11	09	55	14	1313	35714
25	6	0	12 ON	1	36	55	118	57W	960190	995707	11	11	02	28	0306	39748
			OFF	1	39	52	117	50W	946761	981759	11	11	03	15	0311	39795
26	7	1	58 ON	2	18	04	014	15E	591062	612534	11	13	02	22	1359	46942
			OFF	2	09	24	016	09E	606470	628519	11	13	04	33	1409	47073
26	7	2	117 ON	2	02	09	017	39E	626326	649119	11	13	06	23	1416	47183
			OFF	3	17	17	021	44E	708604	734495	11	13	11	19	1438	47479
30	5	1	20 ON	2	41	12	083	24W	593044	614591	11	18	55	46	1322	68146
			OFF	2	38	10	082	11W	589412	610824	11	18	56	33	1327	68193
30	5	2	24 ON	2	23	49	077	46W	586302	607597	11	19	00	12	1349	68412
			OFF	2	20	13	076	52W	589320	610727	11	19	01	07	1353	68467
32	5	0	17 ON	2	38	46	127	44W	589799	611225	11	21	56	01	1325	78961
			OFF	2	36	17	126	48W	587485	608825	11	21	56	39	1329	78999
39	2	1	24 ON	2	59	08	060	55E	630433	653381	12	08	19	15	1222	29955
			OFF	2	55	48	064	06E	620668	643250	12	08	20	10	1236	30010
39	2	2	24 ON	2	53	13	066	07E	613959	636290	12	08	20	53	1245	30053
			OFF	2	49	43	068	27E	605972	628003	12	08	21	49	1255	30109
40	3	1	31 ON	2	60	09	037	09E	633237	656291	12	09	48	46	1217	35326
			OFF	2	55	48	041	26E	620326	642895	12	09	49	59	1235	35399
40	3	2	21 ON	2	53	11	043	30E	613565	635881	12	09	50	41	1244	35441
			OFF	2	50	13	045	29E	606796	628858	12	09	51	28	1253	35488
40	3	3	38 ON	2	43	40	048	59E	595043	616665	12	09	53	11	1309	35591
			OFF	2	38	13	051	15E	588714	610100	12	09	54	35	1319	35675
41	3	0	13 ON	1	37	03	121	22W	939459	974174	12	10	59	29	0254	39569
			OFF	1	40	00	120	14W	926011	960207	12	11	00	16	0259	39616
48	4	0	17 ON	2	38	50	130	09W	588958	610353	12	21	52	46	1312	78766
			OFF	2	36	21	129	13W	587300	608633	12	21	53	24	1316	78804
49	4	1	38 ON	2	71	41	168	17E	676260	700933	12	23	13	08	1026	83588
			OFF	2	67	26	178	21W	655400	679287	12	23	14	41	1121	83681

[redacted] NO. [redacted]

52	5	1	24	ON	2	46	37	135	46E	597769	619493	13	03	49	53	1253	13793
				OFF	2	43	06	137	29E	592958	614502	13	03	50	48	1300	13848
53	5	1	24	ON	2	41	37	115	29E	591261	612742	13	05	20	57	1302	19257
				OFF	2	38	05	116	54E	588348	609720	13	05	21	51	1309	19311
53	5	2	65	ON	2	34	40	118	07E	586808	608122	13	05	22	44	1315	19364
				OFF	2	25	07	120	57E	589417	610829	13	05	25	10	1328	19510
54	5	1	155	ON	2	50	15	088	25E	603669	625615	13	06	48	28	1242	24508
				OFF	2	27	46	097	35E	587826	609177	13	06	54	16	1324	24856
55	2	1	53	ON	2	57	44	059	59E	620365	642936	13	08	16	13	1216	29773
				OFF	2	50	19	065	43E	603593	625536	13	08	18	13	1241	29893
55	2	2	21	ON	2	47	51	067	10E	599267	621047	13	08	18	53	1247	29933
				OFF	2	44	49	068	45E	594807	616420	13	08	19	41	1254	29981
57	9	0	13	ON	1	36	52	123	46W	920328	954305	13	10	55	59	0240	39359
				OFF	1	39	56	122	36W	906532	939977	13	10	56	48	0246	39408
57	9	1	29	ON	1	75	03	050	54W	711006	736990	13	11	08	34	0744	40114
				OFF	2	74	21	031	03W	691688	716943	13	11	09	52	0905	40192
57	9	2	49	ON	2	10	05	033	52E	616475	638899	13	11	28	03	1343	41283
				OFF	2	02	32	035	26E	639437	662722	13	11	29	58	1351	41398
57	9	3	45	ON	3	02	50	036	32E	659651	683696	13	11	31	20	1357	41480
				OFF	3	10	17	038	04E	692563	717849	13	11	33	14	1405	41594
58	3	1	78	ON	2	36	11	004	22E	587514	608854	13	12	51	12	1308	46272
				OFF	2	24	41	007	51E	590861	612326	13	12	54	08	1325	46448
63	4	1	34	ON	2	36	10	108	48W	587427	608764	13	20	20	00	1304	73200
				OFF	2	31	09	107	09W	587458	608796	13	20	21	17	1312	73277
65	5	1	33	ON	2	69	11	174	52E	653919	677751	13	23	10	21	1049	83421
				OFF	2	65	17	176	17W	638858	662123	13	23	11	38	1126	83498
68	2	1	52	ON	2	50	34	131	15E	601031	622878	14	03	45	01	1230	13501
				OFF	2	43	04	135	15E	591266	612747	14	03	46	59	1247	13619
70	3	1	24	ON	2	43	17	089	52E	591303	612785	14	06	46	25	1245	24385
				OFF	2	39	45	091	22E	588739	610125	14	06	47	20	1252	24440
71	4	1	20	ON	2	70	48	033	46E	657846	681825	14	08	08	15	1023	29295
				OFF	2	68	30	040	56E	647722	671321	14	08	09	05	1052	29345
71	4	2	31	ON	2	55	11	060	01E	608991	631135	14	08	13	01	1213	29581
				OFF	2	50	46	063	13E	600713	622547	14	08	14	12	1227	29652
71	4	3	24	ON	2	48	16	064	43E	596911	618603	14	08	14	52	1233	29692
				OFF	2	44	46	066	32E	592640	614172	14	08	15	47	1241	29747
71	4	4	59	ON	2	38	50	069	06E	588277	609646	14	08	17	19	1253	29839
				OFF	2	30	18	071	58E	588550	609929	14	08	19	30	1307	29970
72	9	1	35	ON	2	58	11	034	40E	615437	637823	14	09	41	56	1200	34916
				OFF	2	53	22	038	48E	605087	627085	14	09	43	15	1218	34995
72	9	2	56	ON	2	51	08	040	20E	601122	622971	14	09	43	51	1225	35031
				OFF	2	43	11	044	38E	591050	612523	14	09	45	56	1244	35156
73	6	1	70	ON	2	00	56	033	33E	652603	676383	14	11	26	25	1340	41185
				OFF	3	10	32	035	54E	702667	728334	14	11	29	20	1352	41360
75	2	1	24	ON	2	65	38	043	18W	635260	658390	14	14	08	59	1115	50939
				OFF	2	62	29	038	14W	625535	648300	14	14	09	56	1136	50996
79	3	1	33	ON	2	35	35	110	46W	587637	608982	14	20	16	02	1252	72962
				OFF	2	31	04	109	19W	588916	610309	14	20	17	11	1259	73031
84	8	1	47	ON	2	61	25	119	28E	618782	641293	15	03	37	48	1135	13068
				OFF	2	55	04	125	53E	604828	626817	15	03	39	34	1203	13174
84	8	2	54	ON	2	49	32	129	44E	596052	617712	15	03	41	03	1220	13263
				OFF	2	41	56	133	36E	589014	610411	15	03	43	02	1237	13382
85	8	1	73	ON	2	40	31	111	34E	588262	609631	15	05	13	07	1239	18787
				OFF	2	29	59	115	12E	590089	611525	15	05	15	49	1256	18949
86	2	1	24	ON	2	43	16	087	44E	589573	610990	15	06	42	08	1233	24128

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			OFF	2	39	47	089	13E	587942	609298	15	06	43	02	1239	24182
86	2	2	34 ON	2	32	52	091	41E	588450	609825	15	06	44	48	1251	24288
			OFF	2	27	48	093	12E	592071	613581	15	06	46	05	1258	24365
86	2	3	24 ON	2	08	04	097	51E	633159	656208	15	06	51	05	1322	24665
			OFF	2	04	03	098	41E	646742	670301	15	06	52	06	1326	24726
87	7	1	21 ON	2	70	53	031	20E	648525	672153	15	08	03	54	1009	29034
			OFF	2	68	34	038	39E	639060	662332	15	08	04	45	1039	29085
87	7	2	103 ON	2	57	43	055	38E	609007	631152	15	08	08	00	1150	29280
			OFF	2	43	19	065	05E	589476	610890	15	08	11	50	1232	29510
88	5	1	55 ON	2	61	47	028	28E	617921	640401	15	09	36	35	1130	34595
			OFF	2	54	24	035	53E	602342	624238	15	09	38	38	1202	34718
95	7	0	16 ON	2	39	37	114	21W	587412	608749	15	20	10	29	1233	72629
			OFF	2	37	07	113	24W	587422	608759	15	20	11	08	1237	72668

PHOTOGRAPHIC SUMMARY

FWD	PAN	CAMERA	NO	136	0.2500	SLIT	W/25	FILTER	3404 FILM		
OPN	NO	FRA	FEET	ET	S-EL	S-DIR	EV	FULL	INT	PRI	
PRE-FLT		101	267.1								
1	2	0	15	39.7	ON 240	56.9	60.3	11.76	12.10	11.50	10.90
					OFF 244	58.2	63.9	11.78	12.10	11.50	10.90
2	2	1	34	89.9	ON 216	47.4	44.8	11.61	12.10	11.50	10.90
					OFF 226	51.8	50.0	11.67	12.10	11.50	10.90
6	2	1	25	66.1	ON 233	55.8	55.3	11.72	12.10	11.50	10.90
					OFF 239	58.1	60.9	11.76	12.10	11.50	10.90
6	2	2	50	132.2	ON 255	62.1	79.8	11.85	12.10	11.50	10.90
					OFF 263	62.5	95.1	11.89	12.10	11.50	10.90
7	8	1	99	261.9	ON 227	53.8	51.3	11.68	12.10	11.50	10.90
					OFF 252	61.8	75.5	11.83	12.10	11.50	10.90
7	8	2	45	119.0	ON 268	60.9	109.8	11.92	12.10	11.50	10.90
					OFF 271	58.0	120.4	11.93	12.10	11.50	10.90
8	5	1	85	224.8	ON 228	48.2	43.8	11.69	12.10	11.50	10.90
					OFF 249	57.6	58.3	11.81	12.10	11.50	10.90
9	5	0	12	31.7	ON 155	-10.9	27.7	11.13	0.	0.	0.
					OFF 156	-8.2	27.5	11.14	0.	0.	0.
10	2	1	60	158.7	ON 259	45.7	139.9	11.87	12.09	11.49	10.89
					OFF 247	37.8	145.3	11.80	12.05	11.45	10.85
11	4	1	30	79.3	ON 271	61.7	109.2	11.94	12.10	11.50	10.90
					OFF 271	59.9	117.0	11.94	12.10	11.50	10.90
11	4	2	37	97.9	ON 270	57.0	124.9	11.93	12.10	11.50	10.90
					OFF 268	53.4	131.4	11.92	12.10	11.50	10.90
16	5	0	16	42.3	ON 264	63.9	82.0	11.90	12.10	11.50	10.90
					OFF 265	64.2	87.2	11.90	12.10	11.50	10.90
18	7	1	73	193.1	ON 219	39.3	35.3	11.63	12.06	11.46	10.86
					OFF 241	49.6	42.1	11.77	12.10	11.50	10.90
22	1	1	65	171.9	ON 253	54.4	46.5	11.83	12.10	11.50	10.90
					OFF 265	60.8	59.6	11.90	12.10	11.50	10.90
22	1	2	53	140.2	ON 271	63.4	69.6	11.93	12.10	11.50	10.90
					OFF 275	65.1	86.0	11.96	12.10	11.50	10.90
22	1	3	31	82.0	ON 276	64.1	106.6	11.96	12.10	11.50	10.90
					OFF 275	62.3	115.5	11.95	12.10	11.50	10.90
22	1	4	22	58.2	ON 245	43.4	144.8	11.79	12.09	11.49	10.89
					OFF 240	40.2	146.7	11.76	12.07	11.47	10.87
23	8	1	65	171.9	ON 252	54.3	46.0	11.83	12.10	11.50	10.90
					OFF 265	60.8	59.0	11.90	12.10	11.50	10.90
23	8	2	38	100.5	ON 275	65.3	86.2	11.96	12.10	11.50	10.90

					OFF	276	65.1	98.7	11.96	12.10	11.50	10.90
24	6	1	102	269.8	ON	248	51.8	42.6	11.81	12.10	11.50	10.90
					OFF	268	61.9	61.9	11.92	12.10	11.50	10.90
25	6	0	12	31.7	ON	149	-14.2	25.4	11.07	0.	0.	0.
					OFF	151	-11.4	25.1	11.09	0.	0.	0.
26	7	1	58	153.4	ON	266	61.0	122.4	11.91	12.10	11.50	10.90
					OFF	259	55.5	133.9	11.87	12.10	11.50	10.90
26	7	2	117	309.5	ON	250	49.9	140.6	11.82	12.10	11.50	10.90
					OFF	218	33.0	150.8	11.62	12.01	11.41	10.81
30	5	1	20	52.9	ON	267	65.2	72.1	11.92	12.10	11.50	10.90
					OFF	269	66.0	78.9	11.92	12.10	11.50	10.90
30	5	2	24	63.5	ON	269	64.6	112.1	11.92	12.10	11.50	10.90
					OFF	267	62.9	119.0	11.92	12.10	11.50	10.90
32	5	0	17	45.0	ON	269	66.2	76.9	11.92	12.10	11.50	10.90
					OFF	270	66.7	82.9	11.93	12.10	11.50	10.90
39	2	1	24	63.5	ON	258	54.5	40.6	11.87	12.10	11.50	10.90
					OFF	263	57.3	44.2	11.89	12.10	11.50	10.90
39	2	2	24	63.5	ON	266	59.3	47.5	11.91	12.10	11.50	10.90
					OFF	270	61.8	52.6	11.93	12.10	11.50	10.90
40	3	1	31	82.0	ON	258	53.6	39.2	11.86	12.10	11.50	10.90
					OFF	264	57.3	43.9	11.90	12.10	11.50	10.90
40	3	2	21	55.5	ON	267	59.4	47.2	11.91	12.10	11.50	10.90
					OFF	270	61.5	51.5	11.93	12.10	11.50	10.90
40	3	3	38	100.5	ON	276	65.4	63.3	11.96	12.10	11.50	10.90
					OFF	278	67.4	75.7	11.97	12.10	11.50	10.90
41	3	0	13	34.4	ON	156	-15.8	22.8	11.14	0.	0.	0.
					OFF	158	-12.9	22.5	11.16	0.	0.	0.
48	4	0	17	45.0	ON	279	68.3	71.4	11.97	12.10	11.50	10.90
					OFF	279	69.0	77.8	11.98	12.10	11.50	10.90
49	4	1	38	100.5	ON	235	40.6	28.5	11.73	12.07	11.47	10.87
					OFF	246	46.2	30.9	11.79	12.10	11.50	10.90
52	5	1	24	63.5	ON	275	64.8	52.9	11.96	12.10	11.50	10.90
					OFF	277	66.9	59.8	11.97	12.10	11.50	10.90
53	5	1	24	63.5	ON	278	67.7	62.7	11.97	12.10	11.50	10.90
					OFF	279	69.2	71.4	11.98	12.10	11.50	10.90
53	5	2	65	171.9	ON	279	70.1	80.9	11.98	12.10	11.50	10.90
					OFF	277	69.3	108.1	11.97	12.10	11.50	10.90
54	5	1	155	410.0	ON	270	62.3	46.1	11.93	12.10	11.50	10.90
					OFF	276	70.2	100.8	11.96	12.10	11.50	10.90
55	2	1	53	140.2	ON	261	56.1	36.7	11.88	12.10	11.50	10.90
					OFF	270	62.3	45.6	11.93	12.10	11.50	10.90
55	2	2	21	55.5	ON	272	64.1	49.5	11.94	12.10	11.50	10.90
					OFF	274	66.2	55.1	11.95	12.10	11.50	10.90
57	9	0	13	34.4	ON	157	-17.6	20.2	11.15	0.	0.	0.
					OFF	159	-14.6	19.9	11.17	0.	0.	0.
57	9	1	29	76.7	ON	216	30.0	24.1	11.61	11.98	11.38	10.78
					OFF	225	34.9	25.1	11.67	12.03	11.43	10.83
57	9	2	49	129.6	ON	262	61.3	137.5	11.88	12.10	11.50	10.90
					OFF	252	55.1	145.4	11.83	12.10	11.50	10.90
57	9	3	45	119.0	ON	243	50.4	149.4	11.78	12.10	11.50	10.90
					OFF	230	43.6	153.3	11.70	12.09	11.49	10.89
58	3	1	78	206.3	ON	277	70.5	74.8	11.97	12.10	11.50	10.90
					OFF	275	70.1	109.0	11.95	12.10	11.50	10.90
63	4	1	34	89.9	ON	277	71.2	72.9	11.97	12.10	11.50	10.90
					OFF	277	72.0	88.6	11.97	12.10	11.50	10.90

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65	5	1	33	87.3	ON	244	43.7	25.7	11.78	12.09	11.49	10.89
					OFF	252	48.4	27.8	11.83	12.10	11.50	10.90
68	2	1	52	137.5	ON	271	62.7	40.2	11.94	12.10	11.50	10.90
					OFF	276	68.4	53.0	11.96	12.10	11.50	10.90
70	3	1	24	63.5	ON	276	68.4	51.6	11.96	12.10	11.50	10.90
					OFF	277	70.5	59.9	11.97	12.10	11.50	10.90
71	4	1	20	52.9	ON	242	41.3	23.5	11.77	12.08	11.48	10.88
					OFF	247	44.5	24.5	11.80	12.09	11.49	10.89
71	4	2	31	82.0	ON	268	58.7	33.7	11.92	12.10	11.50	10.90
					OFF	272	62.7	38.7	11.94	12.10	11.50	10.90
71	4	3	24	63.5	ON	274	64.8	42.2	11.95	12.10	11.50	10.90
					OFF	276	67.4	48.2	11.96	12.10	11.50	10.90
71	4	4	59	156.1	ON	278	71.1	61.9	11.97	12.10	11.50	10.90
					OFF	277	73.4	89.3	11.97	12.10	11.50	10.90
72	9	1	35	92.6	ON	265	55.9	30.6	11.90	12.10	11.50	10.90
					OFF	270	60.4	35.2	11.93	12.10	11.50	10.90
72	9	2	56	148.1	ON	272	62.4	37.8	11.94	12.10	11.50	10.90
					OFF	277	68.6	50.9	11.96	12.10	11.50	10.90
73	6	1	70	185.1	ON	246	56.1	150.0	11.79	12.10	11.50	10.90
					OFF	226	45.4	156.5	11.67	12.09	11.49	10.89
75	2	1	24	63.5	ON	254	47.9	24.8	11.84	12.10	11.50	10.90
					OFF	259	51.4	26.6	11.87	12.10	11.50	10.90
79	3	1	33	87.3	ON	278	73.5	67.8	11.97	12.10	11.50	10.90
					OFF	277	74.7	84.0	11.97	12.10	11.50	10.90
84	8	1	47	124.3	ON	268	52.5	24.5	11.92	12.10	11.50	10.90
					OFF	274	59.0	29.1	11.95	12.10	11.50	10.90
84	8	2	54	142.8	ON	277	64.2	35.0	11.97	12.10	11.50	10.90
					OFF	278	70.4	47.8	11.97	12.10	11.50	10.90
85	8	1	73	193.1	ON	277	71.5	50.5	11.97	12.10	11.50	10.90
					OFF	273	75.8	86.3	11.94	12.10	11.50	10.90
86	2	1	24	63.5	ON	278	69.5	44.0	11.97	12.10	11.50	10.90
					OFF	277	72.0	51.8	11.97	12.10	11.50	10.90
86	2	2	34	89.9	ON	274	75.4	74.2	11.95	12.10	11.50	10.90
					OFF	271	75.9	95.0	11.93	12.10	11.50	10.90
86	2	3	24	63.5	ON	245	64.3	146.2	11.79	12.10	11.50	10.90
					OFF	239	60.7	150.4	11.75	12.10	11.50	10.90
87	7	1	21	55.5	ON	255	40.7	19.5	11.85	12.07	11.47	10.87
					OFF	259	44.0	20.3	11.87	12.09	11.49	10.89
87	7	2	103	272.4	ON	273	56.3	25.9	11.94	12.10	11.50	10.90
					OFF	278	69.6	43.4	11.97	12.10	11.50	10.90
88	5	1	55	145.5	ON	269	52.0	23.1	11.92	12.10	11.50	10.90
					OFF	275	59.7	28.2	11.96	12.10	11.50	10.90
95	7	0	17	45.0	ON	277	72.9	47.2	11.97	12.10	11.50	10.90
					OFF	276	74.6	54.2	11.96	12.10	11.50	10.90

PHOTOGRAPHIC SUMMARY

AFT PAN CAMERA NC 137 0.1750 SLIT W/21

OPN	NO	FRA	FEET		ET	S-EL	S-DIR	FILTER EV	3404 FILM FULL	INT	PRI
PRE-FLT		101	267.1								
1	2	0	15	39.7	ON	343	56.5	58.5	12.28	12.75	12.15	11.55
					OFF	348	57.8	62.1	12.30	12.75	12.15	11.55
2	2	1	34	89.9	ON	309	46.7	42.6	12.12	12.75	12.15	11.55
					OFF	323	51.2	48.1	12.19	12.75	12.15	11.55
6	2	1	25	66.1	ON	333	55.3	53.5	12.23	12.75	12.15	11.55
					OFF	342	57.7	59.0	12.27	12.75	12.15	11.55

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6	2	2	50	132.2	ON	364	62.0	77.8	12.36	12.75	12.15	11.55
					OFF	375	62.6	93.2	12.40	12.75	12.15	11.55
7	8	1	99	261.9	ON	325	53.3	49.5	12.20	12.75	12.15	11.55
					OFF	359	61.6	73.6	12.34	12.75	12.15	11.55
7	8	2	45	119.0	ON	383	61.2	108.2	12.43	12.75	12.15	11.55
					OFF	387	58.5	119.1	12.45	12.75	12.15	11.55
8	5	1	85	224.8	ON	326	47.5	41.7	12.20	12.75	12.15	11.55
					OFF	356	57.1	56.5	12.33	12.75	12.15	11.55
9	5	0	12	31.7	ON	223	-12.3	27.4	11.65	0.	0.	0.
					OFF	224	-9.5	27.1	11.66	0.	0.	0.
10	2	1	60	158.7	ON	370	46.4	139.3	12.38	12.75	12.15	11.55
					OFF	353	38.6	144.9	12.32	12.71	12.11	11.51
11	4	1	30	79.3	ON	387	62.0	107.5	12.45	12.75	12.15	11.55
					OFF	387	60.3	115.6	12.45	12.75	12.15	11.55
11	4	2	37	97.9	ON	386	57.5	123.7	12.44	12.75	12.15	11.55
					OFF	382	54.0	130.5	12.43	12.75	12.15	11.55
16	5	0	16	42.3	ON	377	63.8	80.0	12.41	12.75	12.15	11.55
					OFF	379	64.2	85.1	12.42	12.75	12.15	11.55
18	7	1	73	193.1	ON	313	38.5	31.8	12.14	12.71	12.11	11.51
					OFF	344	48.8	40.2	12.28	12.75	12.15	11.55
22	1	1	65	171.9	ON	361	53.8	44.8	12.35	12.75	12.15	11.55
					OFF	379	60.4	57.8	12.42	12.75	12.15	11.55
22	1	2	53	140.2	ON	386	63.1	67.6	12.45	12.75	12.15	11.55
					OFF	393	65.1	83.9	12.47	12.75	12.15	11.55
22	1	3	31	82.0	ON	394	64.3	104.7	12.47	12.75	12.15	11.55
					OFF	392	62.7	113.9	12.47	12.75	12.15	11.55
22	1	4	22	58.2	ON	351	44.2	144.3	12.31	12.74	12.14	11.54
					OFF	343	41.1	146.3	12.27	12.72	12.12	11.52
23	8	1	65	171.9	ON	360	53.6	44.3	12.35	12.75	12.15	11.55
					OFF	379	60.3	57.1	12.42	12.75	12.15	11.55
23	8	2	38	100.5	ON	393	65.3	84.1	12.47	12.75	12.15	11.55
					OFF	394	65.2	96.7	12.48	12.75	12.15	11.55
24	6	1	102	269.8	ON	354	51.1	40.8	12.32	12.75	12.15	11.55
					OFF	382	61.5	60.1	12.43	12.75	12.15	11.55
25	6	0	12	31.7	ON	214	-15.5	25.1	11.59	0.	0.	0.
					OFF	217	-12.7	24.8	11.61	0.	0.	0.
26	7	1	58	153.4	ON	380	61.5	121.0	12.42	12.75	12.15	11.55
					OFF	370	56.1	132.9	12.38	12.75	12.15	11.55
26	7	2	117	309.5	ON	357	50.7	139.9	12.33	12.75	12.15	11.55
					OFF	312	34.0	150.6	12.14	12.67	12.07	11.47
30	5	1	20	52.9	ON	382	65.0	70.0	12.43	12.75	12.15	11.55
					OFF	384	65.9	76.7	12.44	12.75	12.15	11.55
30	5	2	24	63.5	ON	384	64.9	110.3	12.44	12.75	12.15	11.55
					OFF	382	63.4	117.4	12.43	12.75	12.15	11.55
32	5	0	17	45.0	ON	384	66.0	74.7	12.44	12.75	12.15	11.55
					OFF	385	66.6	80.6	12.44	12.75	12.15	11.55
39	2	1	24	63.5	ON	369	53.8	38.9	12.38	12.75	12.15	11.55
					OFF	376	56.6	42.6	12.41	12.75	12.15	11.55
39	2	2	24	63.5	ON	381	58.7	45.8	12.42	12.75	12.15	11.55
					OFF	386	61.2	50.8	12.44	12.75	12.15	11.55
40	3	1	31	82.0	ON	368	52.9	37.6	12.38	12.75	12.15	11.55
					OFF	377	56.7	42.2	12.41	12.75	12.15	11.55
40	3	2	21	55.5	ON	382	58.8	45.5	12.43	12.75	12.15	11.55
					OFF	386	61.0	49.7	12.44	12.75	12.15	11.55
40	3	3	38	100.5	ON	394	65.0	61.2	12.47	12.75	12.15	11.55

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				OFF	398	67.2	75.4	12.49	12.75	12.15	11.55
41	3	0	13	34.4	ON	224	-17.1	22.6	11.66	0.	0.	0.
					OFF	227	-14.2	22.2	11.68	0.	0.	0.
48	4	0	17	45.0	ON	398	68.0	69.0	12.49	12.75	12.15	11.55
					OFF	399	68.8	75.4	12.49	12.75	12.15	11.55
49	4	1	38	100.5	ON	337	39.7	25.6	12.25	12.72	12.12	11.52
					OFF	351	45.3	28.8	12.31	12.74	12.14	11.54
52	5	1	24	63.5	ON	393	64.2	51.0	12.47	12.75	12.15	11.55
					OFF	396	66.4	57.7	12.48	12.75	12.15	11.55
53	5	1	24	63.5	ON	397	67.3	60.5	12.48	12.75	12.15	11.55
					OFF	398	68.9	69.0	12.49	12.75	12.15	11.55
53	5	2	65	171.9	ON	399	70.0	78.3	12.49	12.75	12.15	11.55
					OFF	396	69.6	105.8	12.48	12.75	12.15	11.55
54	5	1	155	410.0	ON	386	61.7	44.4	12.44	12.75	12.15	11.55
					OFF	395	70.4	98.2	12.48	12.75	12.15	11.55
55	2	1	53	140.2	ON	373	55.3	35.2	12.40	12.75	12.15	11.55
					OFF	385	61.7	44.0	12.44	12.75	12.15	11.55
55	2	2	21	55.5	ON	388	63.6	47.7	12.45	12.75	12.15	11.55
					OFF	391	65.7	53.1	12.46	12.75	12.15	11.55
57	9	0	13	34.4	ON	225	-18.9	20.0	11.67	0.	0.	0.
					OFF	228	-15.9	19.6	11.69	0.	0.	0.
57	9	1	29	76.7	ON	309	29.1	19.9	12.12	12.61	12.01	11.41
					OFF	322	34.0	21.4	12.18	12.67	12.07	11.47
57	9	2	49	129.6	ON	374	62.0	136.3	12.40	12.75	12.15	11.55
					OFF	360	55.9	144.6	12.34	12.75	12.15	11.55
57	9	3	45	119.0	ON	347	51.3	148.8	12.29	12.75	12.15	11.55
					OFF	329	44.5	153.0	12.21	12.74	12.14	11.54
58	3	1	78	206.3	ON	396	70.3	72.2	12.48	12.75	12.15	11.55
					OFF	392	70.4	106.6	12.47	12.75	12.15	11.55
63	4	1	34	89.9	ON	396	70.9	70.2	12.48	12.75	12.15	11.55
					OFF	396	72.0	85.8	12.48	12.75	12.15	11.55
65	5	1	33	87.3	ON	349	42.8	23.5	12.30	12.73	12.13	11.53
					OFF	359	47.6	26.0	12.34	12.75	12.15	11.55
68	2	1	52	137.5	ON	388	62.1	38.6	12.45	12.75	12.15	11.55
					OFF	394	67.8	50.9	12.47	12.75	12.15	11.55
70	3	1	24	63.5	ON	394	67.8	49.6	12.47	12.75	12.15	11.55
					OFF	396	70.1	57.5	12.48	12.75	12.15	11.55
71	4	1	20	52.9	ON	346	40.4	21.0	12.29	12.72	12.12	11.52
					OFF	353	43.6	22.4	12.32	12.74	12.14	11.54
71	4	2	31	82.0	ON	383	58.0	32.2	12.43	12.75	12.15	11.55
					OFF	389	62.0	37.2	12.45	12.75	12.15	11.55
71	4	3	24	63.5	ON	391	64.1	40.6	12.46	12.75	12.15	11.55
					OFF	394	66.9	46.3	12.47	12.75	12.15	11.55
71	4	4	59	156.1	ON	397	70.7	59.4	12.48	12.75	12.15	11.55
					OFF	396	73.4	86.2	12.48	12.75	12.15	11.55
72	9	1	35	92.6	ON	378	55.1	29.2	12.41	12.75	12.15	11.55
					OFF	385	59.7	33.8	12.44	12.75	12.15	11.55
72	9	2	56	148.1	ON	389	61.7	36.3	12.45	12.75	12.15	11.55
					OFF	395	68.1	48.9	12.48	12.75	12.15	11.55
73	6	1	70	185.1	ON	352	56.9	149.3	12.31	12.75	12.15	11.55
					OFF	323	46.4	156.2	12.19	12.75	12.15	11.55
75	2	1	24	63.5	ON	363	47.0	23.1	12.36	12.75	12.15	11.55
					OFF	370	50.6	25.1	12.38	12.75	12.15	11.55
79	3	1	33	87.3	ON	397	73.2	64.9	12.48	12.75	12.15	11.55
					OFF	396	74.6	80.6	12.48	12.75	12.15	11.55

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84	8	1	47	124.3	ON	384	51.6	23.1	12.44	12.75	12.15	11.55
					OFF	391	58.2	27.8	12.46	12.75	12.15	11.55
84	8	2	54	142.8	ON	396	63.5	33.5	12.48	12.75	12.15	11.55
					OFF	397	69.8	45.6	12.48	12.75	12.15	11.55
85	8	1	73	193.1	ON	396	70.9	48.2	12.48	12.75	12.15	11.55
					OFF	390	75.7	82.6	12.46	12.75	12.15	11.55
86	2	1	24	63.5	ON	397	68.9	42.0	12.48	12.75	12.15	11.55
					OFF	396	71.5	49.4	12.48	12.75	12.15	11.55
86	2	2	34	89.9	ON	392	75.2	70.8	12.47	12.75	12.15	11.55
					OFF	387	76.0	91.4	12.45	12.75	12.15	11.55
86	2	3	24	63.5	ON	351	65.1	145.1	12.31	12.75	12.15	11.55
					OFF	341	61.6	149.6	12.27	12.75	12.15	11.55
87	7	1	21	55.5	ON	364	39.8	17.1	12.36	12.72	12.12	11.52
					OFF	370	43.1	18.3	12.38	12.73	12.13	11.53
87	7	2	103	272.4	ON	390	55.5	24.6	12.46	12.75	12.15	11.55
					OFF	397	68.9	41.4	12.48	12.75	12.15	11.55
88	5	1	55	145.5	ON	384	51.2	21.7	12.44	12.75	12.15	11.55
					OFF	393	58.9	26.9	12.47	12.75	12.15	11.55
95	7	0	16	42.3	ON	395	72.3	44.8	12.48	12.75	12.15	11.55
					OFF	394	74.1	51.4	12.47	12.75	12.15	11.55

STELLAR-INDEX SUMMARY

CAMERA DATA	ET	FILM	FILTER	GRID	ASSEMBLY NO D17
STELLAR	2.0	3401	NONE	19	
INDEX	1/50C	3400	W/21	17	

PERFORMANCE SUMMARY

OPN	NO	FR	STEL FEET	INDX FEET	H	M	S	Q	ON LAT	ON LONG	Q	OFF LAT	OFF LONG	SEC DUR
PRE-FLT		14	1.39	2.77										
1	2	0	2	0.20	C.40	23	27	08	2	52	152W	2	49	150W	39
2	2	1	5	0.5C	C.99	00	53	16	2	65	170E	2	60	178E	93
6	2	1	4	0.4C	C.79	06	55	49	2	54	092E	2	50	095E	63
6	2	2	7	0.69	1.39	06	59	41	2	40	100E	2	32	103E	117
7	8	1	14	1.39	2.77	08	24	52	2	57	067E	2	42	077E	249
7	8	2	6	0.59	1.19	08	33	29	2	24	083E	2	18	084E	100
8	5	1	12	1.19	2.38	09	52	43	2	64	035E	2	52	049E	213
9	5	0	2	0.2C	C.40	11	C5	25	1	39	115W	1	42	113W	47
10	2	1	9	0.89	1.78	13	C9	29	3	00	020E	3	10	022E	144
11	4	1	4	0.4C	C.79	14	32	52	2	24	007W	2	20	006W	69
11	4	2	5	0.5C	C.99	14	35	23	2	14	005W	2	09	003W	84
16	5	0	3	0.3C	C.59	21	58	50	2	37	124W	2	35	123W	37
18	7	1	10	0.99	1.98	00	48	26	2	72	147E	2	63	171E	189
22	1	1	9	0.89	1.78	06	52	32	2	57	087E	2	48	094E	154
22	1	2	8	0.79	1.58	06	56	32	2	42	097E	2	35	100E	118
22	1	3	4	0.4C	C.79	07	C0	52	2	25	102E	2	21	104E	70
22	1	4	3	0.3C	C.59	07	C8	53	3	05	109E	3	09	110E	56
23	8	1	10	0.99	1.98	08	22	19	2	57	064E	2	48	071E	154
23	8	2	5	0.5C	C.99	08	28	23	2	35	077E	2	29	079E	84
24	6	1	15	1.48	2.97	09	51	18	2	60	038E	2	46	050E	236
25	6	0	1	0.1C	C.2C	11	02	28	1	38	118W	1	41	117W	47
26	7	1	9	0.89	1.78	13	02	22	2	17	014E	2	08	016E	131
26	7	2	16	1.58	3.17	13	C6	23	2	01	017E	3	18	022E	296
30	5	1	3	0.3C	C.59	18	55	46	2	40	083W	2	37	081W	47
30	5	2	4	0.40	C.79	19	C0	12	2	23	077W	2	19	076W	55
32	5	0	2	0.2C	C.4C	21	56	01	2	37	127W	2	35	126W	38

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39	2	1	4	0.40	C.79	08	19	15	2	58	061E	2	54	064E	55
39	2	2	3	0.30	C.59	08	20	53	2	52	066E	2	48	068E	56
40	3	1	4	0.40	C.79	09	48	46	2	59	038E	2	54	042E	73
40	3	2	3	0.30	0.59	09	50	41	2	52	044E	2	49	046E	47
40	3	3	6	0.59	1.19	09	53	11	2	42	049E	2	37	051E	84
41	3	0	2	0.20	C.40	10	59	29	1	38	120W	1	41	119W	47
48	4	0	2	0.20	C.40	21	52	46	2	38	129W	2	35	128W	38
49	4	1	6	0.59	1.19	23	13	08	2	71	170E	2	66	176W	93
52	5	1	3	0.30	C.59	03	49	53	2	45	136E	2	42	137E	55
53	5	1	3	0.30	C.59	05	20	57	2	40	115E	2	37	117E	54
53	5	2	10	0.99	1.98	05	22	44	2	33	118E	2	24	121E	146
54	5	1	22	2.18	4.36	06	48	28	2	49	088E	2	26	097E	348
55	2	1	7	0.69	1.39	08	16	13	2	56	060E	2	49	066E	120
55	2	2	3	0.30	C.59	08	18	53	2	47	067E	2	44	069E	48
57	9	0	2	0.20	C.40	10	55	59	1	38	123W	1	41	122W	49
57	9	1	4	0.40	C.79	11	08	34	1	75	046W	2	74	027W	78
57	9	2	7	0.69	1.39	11	28	03	2	09	034E	2	01	035E	115
57	9	3	7	0.69	1.39	11	31	20	3	03	036E	3	11	038E	114
58	3	1	11	1.09	2.18	12	51	12	2	35	004E	2	23	008E	176
63	4	1	5	0.50	C.99	20	20	00	2	35	108W	2	30	106W	77
65	5	1	5	0.50	C.99	23	10	21	2	68	176E	2	64	174W	77
68	2	1	7	0.69	1.39	03	45	01	2	49	131E	2	42	135E	118
70	3	1	3	0.30	C.59	06	46	25	2	42	090E	2	38	091E	55
71	4	1	3	0.30	C.59	08	08	15	2	70	036E	2	67	042E	50
71	4	2	5	0.50	0.99	08	13	01	2	54	060E	2	49	063E	71
71	4	3	3	0.30	C.59	08	14	52	2	47	065E	2	43	066E	55
71	4	4	9	0.89	1.78	08	17	19	2	38	069E	2	29	072E	131
72	9	1	5	0.50	C.99	09	41	56	2	57	035E	2	52	039E	79
72	9	2	8	0.79	1.58	09	43	51	2	50	040E	2	42	045E	125
73	6	1	10	0.99	1.98	11	26	25	2	00	033E	3	11	036E	175
75	2	1	3	0.30	C.59	14	C8	59	2	64	041W	2	61	037W	57
79	3	1	5	0.50	C.99	20	16	02	2	34	110W	2	30	109W	69
84	8	1	6	0.59	1.19	03	37	48	2	60	120E	2	54	126E	106
84	8	2	8	0.79	1.58	03	41	03	2	48	130E	2	41	134E	119
85	8	1	11	1.09	2.13	05	13	07	2	39	111E	2	29	115E	162
86	2	1	3	0.30	C.59	06	42	08	2	42	088E	2	38	089E	54
86	2	2	5	0.50	C.99	06	44	48	2	32	092E	2	26	093E	77
86	2	3	3	0.30	C.59	06	51	05	2	07	098E	2	03	098E	61
87	7	1	3	0.30	C.59	08	03	54	2	70	033E	2	67	040E	51
87	7	2	15	1.48	2.97	08	08	00	2	56	056E	2	42	065E	230
88	5	1	8	0.79	1.58	09	36	35	2	61	029E	2	53	036E	123
95	7	0	2	0.20	C.40	20	10	29	2	38	113W	2	36	113W	39

NOTES

1) TM DATA INDICATE NORMAL CAMERA SYSTEM PERFORMANCE -
   A) THE S/I CAMERAS WERE OBSERVED OUT OF FILM ON REV 95.
   B) THE SLAVE CAMERA CYCLE COUNTER IS UNRELIABLE, THEREFORE CYCLE COUNTS FROM THE MASTER ARE USED FOR BOTH INSTRUMENTS. DURING ALL ENGINEERING OPERATIONS OBSERVED ON TM, THE CAMERAS HAVE HAD LESS THAN 1 PERCENT RATE DIFFERENCE.
   C) THE CAMERAS ARE CONSISTANTLY OPERATING APPROX 2 PERCENT SLOW RELATIVE TO PREFLIGHT CALIBRATION. THIS HAS BEEN COMPENSATED IN FLIGHT BY SELECTING A HIGHER RAMP THAN REQUIRED BY THE ORBIT.
2) MARGINAL TARGET LATITUDE COVERAGE, FROM LAUNCH THRU OPERATIONS ON

NO [redacted]

REV 11, WAS CAUSED PRIMARILY BY LACK OF SYNCHRONIZATION BETWEEN THE ORBIT AND THE H-TIMER TAPE, BY THE STC. THIS WAS PROBABLY THE RESULT OF FAULTY ORBITAL DESCRIPTIONS RELEASED BY THE STC BETWEEN REVS 7 AND 11. APPARENTLY VALID DATA HAS BEEN RELEASED SUBSEQUENT TO REV 11.

3) THE LAST 5 FRAMES OF OPERATION 95-7-0 ARE CONTAINED IN THE SECOND RECOVERY CAPSULE.

A. 1020-1 LAUNCH 2158Z 6-9-65
B. DRY
C. PERFORMANCE ESTIMATE, PART 2

TOP SECRET [redacted]
NO. [redacted]

RATE ESTIMATE
FWD PAN CAMERA NUMBER 136

OPN	NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN RATE R/SEC	RATE I/SEC	PCT CALIB	RATE REQD
1	2 0	15	6	5 ON	1358	0.3992	0.03368	2.508	60.19	-1.9	-8.2
				OFF	39	0.4049	0.03416	2.544	61.06	-1.9	-8.0
2	2 1	34	6	5 ON	1133	0.3588	0.03028	2.255	54.11	-1.9	-10.8
				OFF	93	0.3756	0.03169	2.360	56.63	-1.9	-9.9
6	2 1	25	6	5 ON	1290	0.3875	0.03270	2.435	58.44	-1.9	-10.5
				OFF	63	0.3979	0.03357	2.500	60.00	-1.9	-9.8
6	2 2	50	6	5 ON	1522	0.4236	0.03574	2.661	63.87	-1.9	-7.8
				OFF	117	0.4365	0.03683	2.743	65.82	-1.9	-6.5
7	8 1	99	6	5 ON	1234	0.3775	0.03185	2.372	56.93	-1.9	-11.6
				OFF	249	0.4178	0.03526	2.625	63.01	-1.9	-8.6
7	8 2	45	6	5 ON	1751	0.4455	0.03759	2.799	67.19	-1.9	-5.0
				OFF	100	0.4497	0.03795	2.826	67.81	-1.9	-3.4
8	5 1	85	6	5 ON	1244	0.3794	0.03201	2.384	57.21	-1.9	-6.2
				OFF	213	0.4141	0.03494	2.602	62.45	-1.9	-5.0
9	5 0	12	6	5 ON	213	0.2578	0.02175	1.620	38.88	-1.9	-4.2
				OFF	47	0.2599	0.02193	1.633	39.18	-1.9	-5.0
10	2 1	60	6	5 ON	2265	0.4299	0.03628	2.701	64.83	-1.9	-0.9
				OFF	144	0.4110	0.03468	2.582	61.98	-1.9	0.5
11	4 1	30	6	5 ON	1874	0.4503	0.03799	2.829	67.90	-1.9	-3.9
				OFF	69	0.4506	0.03802	2.831	67.94	-1.9	-3.5
11	4 2	37	6	5 ON	2025	0.4486	0.03785	2.819	67.65	-1.9	-2.9
				OFF	84	0.4444	0.03750	2.792	67.02	-1.9	-2.2
16	5 0	16	6	5 ON	1717	0.4387	0.03701	2.756	66.15	-2.9	-4.7
				OFF	37	0.4408	0.03720	2.770	66.48	-2.9	-4.7
18	7 1	73	6	4 ON	1168	0.3632	0.03064	2.282	54.76	-2.9	-4.6
				OFF	189	0.4004	0.03378	2.516	60.37	-2.9	-2.3
22	1 1	65	6	4 ON	1464	0.4195	0.03540	2.636	63.26	-2.9	-1.4
				OFF	154	0.4405	0.03717	2.768	66.43	-2.9	-1.0
22	1 2	53	6	4 ON	1703	0.4495	0.03793	2.824	67.78	-2.9	-1.0
				OFF	118	0.4567	0.03854	2.870	68.87	-2.9	-1.2
22	1 3	31	6	4 ON	1964	0.4584	0.03868	2.880	69.12	-2.9	-1.5
				OFF	70	0.4563	0.03850	2.867	68.81	-2.9	-1.6
22	1 4	22	6	4 ON	2444	0.4077	0.03440	2.562	61.49	-2.9	-1.9
				OFF	56	0.3982	0.03360	2.502	60.04	-2.9	-1.9
23	8 1	65	6	4 ON	1461	0.4191	0.03536	2.633	63.20	-2.9	-1.5
				OFF	154	0.4402	0.03715	2.766	66.39	-2.9	-1.1
23	8 2	38	6	4 ON	1825	0.4570	0.03856	2.871	68.91	-2.9	-1.2
				OFF	84	0.4587	0.03871	2.882	69.18	-2.9	-1.4
24	6 1	102	6	4 ON	1417	0.4116	0.03473	2.586	62.07	-2.9	-1.6
				OFF	236	0.4444	0.03750	2.792	67.01	-2.9	-1.0
25	6 0	12	6	4 ON	299	0.2477	0.02090	1.556	37.35	-2.9	-10.2
				OFF	47	0.2508	0.02116	1.576	37.82	-2.9	-10.6
26	7 1	58	6	4 ON	2106	0.4423	0.03732	2.779	66.69	-5.0	-4.0
				OFF	131	0.4301	0.03629	2.703	64.86	-5.0	-4.0

26	7	2	117	6	4 ON	2347	0.4150	0.03501	2.607	62.58	-5.0	-4.2
					OFF	296	0.3617	0.03052	2.273	54.55	-5.0	-4.8
30	5	1	20	6	4 ON	1759	0.4441	0.03747	2.790	66.97	-5.0	-3.2
					OFF	47	0.4464	0.03767	2.805	67.32	-5.0	-3.3
30	5	2	24	6	4 ON	2025	0.4469	0.03771	2.808	67.39	-5.0	-3.8
					OFF	55	0.4442	0.03748	2.791	66.99	-5.0	-3.8
32	5	0	17	6	4 ON	1800	0.4463	0.03766	2.804	67.30	-5.0	-3.3
					OFF	38	0.4477	0.03778	2.813	67.51	-5.0	-3.4
39	2	1	24	5	4 ON	1486	0.4292	0.03621	2.696	64.72	-5.0	-0.2
					OFF	55	0.4367	0.03685	2.744	65.86	-5.0	-0.1
39	2	2	24	5	4 ON	1583	0.4426	0.03735	2.781	66.75	-5.0	0.1
					OFF	56	0.4487	0.03786	2.819	67.66	-5.0	0.1
40	3	1	31	5	4 ON	1477	0.4278	0.03610	2.688	64.52	-5.0	0.0
					OFF	73	0.4379	0.03695	2.752	66.04	-5.0	0.2
40	3	2	21	5	4 ON	1592	0.4438	0.03744	2.788	66.92	-5.0	0.3
					OFF	47	0.4488	0.03787	2.820	67.68	-5.0	0.3
40	3	3	38	5	4 ON	1743	0.4581	0.03865	2.878	69.08	-5.0	0.3
					OFF	84	0.4624	0.03902	2.905	69.73	-5.0	0.1
41	3	0	13	5	4 ON	333	0.2599	0.02193	1.633	39.19	-5.0	-7.6
					OFF	47	0.2632	0.02221	1.654	39.69	-5.0	-7.9
48	4	0	17	5	4 ON	1834	0.4628	0.03905	2.908	69.79	-5.0	0.2
					OFF	38	0.4637	0.03913	2.914	69.93	-5.0	0.1
49	4	1	38	5	4 ON	1270	0.3912	0.03301	2.458	58.99	-5.0	-2.0
					OFF	93	0.4082	0.03444	2.565	61.55	-5.0	-1.1
52	5	1	24	5	4 ON	1721	0.4565	0.03852	2.868	68.84	-5.0	0.4
					OFF	55	0.4600	0.03881	2.890	69.36	-5.0	0.3
53	5	1	24	5	4 ON	1800	0.4614	0.03893	2.899	69.58	-5.0	0.3
					OFF	54	0.4633	0.03909	2.911	69.86	-5.0	0.2
53	5	2	65	5	4 ON	1907	0.4642	0.03917	2.917	70.00	-5.0	0.2
					OFF	146	0.4609	0.03889	2.896	69.50	-5.0	-0.1
54	5	1	155	5	4 ON	1666	0.4485	0.03785	2.818	67.64	-5.7	-0.3
					OFF	348	0.4592	0.03875	2.885	69.25	-5.7	-0.7
55	2	1	53	5	4 ON	1542	0.4341	0.03663	2.728	65.47	-5.7	-0.7
					OFF	120	0.4478	0.03779	2.814	67.53	-5.7	-0.5
55	2	2	21	5	4 ON	1701	0.4517	0.03811	2.838	68.11	-5.7	-0.4
					OFF	48	0.4550	0.03839	2.859	68.61	-5.7	-0.4
57	9	0	13	5	4 ON	369	0.2606	0.02199	1.637	39.30	-5.7	-9.7
					OFF	49	0.2643	0.02230	1.661	39.86	-5.7	-10.0
57	9	1	29	5	4 ON	1124	0.3590	0.03029	2.255	54.13	-5.7	-5.3
					OFF	78	0.3742	0.03158	2.351	56.43	-5.7	-4.1
57	9	2	49	5	4 ON	2293	0.4347	0.03668	2.731	65.55	-5.7	-1.1
					OFF	115	0.4180	0.03527	2.627	63.04	-5.7	-1.1
57	9	3	45	5	4 ON	2489	0.4033	0.03403	2.534	60.82	-5.7	-1.4
					OFF	114	0.3823	0.03225	2.402	57.64	-5.7	-1.6
58	3	1	78	5	4 ON	1899	0.4607	0.03888	2.895	69.48	-5.7	-0.4
					OFF	176	0.4564	0.03851	2.867	68.82	-5.7	-0.8
63	4	1	34	5	4 ON	1906	0.4608	0.03888	2.895	69.49	-5.7	-0.5
					OFF	77	0.4601	0.03883	2.891	69.39	-5.7	-0.6
65	5	1	33	5	4 ON	1360	0.4051	0.03418	2.546	61.09	-5.7	-2.0
					OFF	77	0.4178	0.03525	2.625	63.00	-5.7	-1.4
68	2	1	52	5	4 ON	1692	0.4508	0.03804	2.833	67.98	-5.7	-0.3
					OFF	118	0.4583	0.03867	2.880	69.12	-5.7	-0.3
70	3	1	24	5	4 ON	1810	0.4585	0.03869	2.881	69.14	-5.7	-0.3
					OFF	55	0.4602	0.03883	2.891	69.40	-5.7	-0.4
71	4	1	20	5	4 ON	1340	0.4019	0.03391	2.525	60.61	-5.5	-2.2

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					OFF	50	0.4104	0.03463	2.576	61.88	-5.5	-1.8
71	4	2	31	5	4 ON	1625	0.4449	0.03754	2.795	67.09	-5.5	-0.2
					OFF	71	0.4515	0.03810	2.837	68.09	-5.5	-0.1
71	4	3	24	5	4 ON	1736	0.4549	0.03838	2.858	68.60	-5.5	-0.1
					OFF	55	0.4580	0.03865	2.878	69.07	-5.5	-0.1
71	4	4	59	5	4 ON	1883	0.4612	0.03891	2.897	69.54	-5.5	-0.2
					OFF	131	0.4598	0.03880	2.889	69.33	-5.5	-0.4
72	9	1	35	5	4 ON	1579	0.4395	0.03708	2.761	66.27	-5.5	-0.3
					OFF	79	0.4480	0.03780	2.815	67.55	-5.5	-0.2
72	9	2	56	5	4 ON	1694	0.4516	0.03810	2.837	68.09	-5.5	-0.1
					OFF	125	0.4593	0.03875	2.886	69.26	-5.5	-0.1
73	6	1	70	5	4 ON	2464	0.4084	0.03446	2.566	61.58	-5.5	-1.3
					OFF	175	0.3756	0.03169	2.360	56.63	-5.5	-1.8
75	2	1	24	5	4 ON	1457	0.4221	0.03562	2.652	63.65	-5.5	-1.0
					OFF	57	0.4303	0.03630	2.703	64.88	-5.5	-0.7
79	3	1	33	5	4 ON	1947	0.4613	0.03892	2.898	69.56	-5.5	-0.3
					OFF	69	0.4597	0.03879	2.889	69.32	-5.5	-0.4
84	8	1	47	5	4 ON	1635	0.4459	0.03763	2.802	67.25	-5.5	1.7
					OFF	106	0.4550	0.03839	2.859	68.61	-5.5	1.3
84	8	2	54	5	4 ON	1830	0.4598	0.03880	2.889	69.34	-5.5	0.9
					OFF	119	0.4613	0.03892	2.898	69.56	-5.5	-0.1
85	8	1	73	5	4 ON	1973	0.4608	0.03889	2.896	69.49	-5.5	-0.3
					OFF	162	0.4527	0.03820	2.844	68.27	-5.5	-1.7
86	2	1	24	5	4 ON	1933	0.4614	0.03893	2.899	69.57	-5.5	0.1
					OFF	54	0.4606	0.03886	2.894	69.46	-5.5	-0.4
86	2	2	34	5	4 ON	2093	0.4556	0.03844	2.862	68.70	-5.5	-1.4
					OFF	77	0.4496	0.03794	2.825	67.80	-5.5	-2.1
86	2	3	24	5	4 ON	2470	0.4072	0.03436	2.559	61.41	-5.5	-4.9
					OFF	61	0.3966	0.03346	2.492	59.80	-5.5	-5.3
87	7	1	21	5	4 ON	1464	0.4232	0.03571	2.659	63.82	-5.5	1.5
					OFF	51	0.4304	0.03632	2.704	64.90	-5.5	1.6
87	7	2	103	5	4 ON	1710	0.4529	0.03821	2.846	68.29	-5.5	1.6
					OFF	230	0.4614	0.03893	2.899	69.57	-5.5	0.0
88	5	1	55	5	4 ON	1643	0.4468	0.03770	2.807	67.37	-5.5	1.8
					OFF	123	0.4566	0.03853	2.869	68.86	-5.5	1.3
95	7	0	17	5	4 ON	2014	0.4597	0.03879	2.888	69.31	-5.5	-0.7
					OFF	39	0.4581	0.03865	2.878	69.08	-5.5	-1.0

RATE ESTIMATE
AFT PAN CAMERA NUMBER 137

OPN	NO	FR	R	A	TUR/ DUR	INST CPS	INST ANG VEL	SCAN RATE R/SEC	RATE I/SEC	PCT CALIB	RATE REQD
1	2	0	15	6	5 ON	1358	0.3991	0.03367	2.507	60.18	-1.4	-8.2
					OFF	39	0.4048	0.03415	2.543	61.04	-1.4	-8.1
2	2	1	34	6	5 ON	1133	0.3591	0.03030	2.256	54.15	-1.4	-10.7
					OFF	93	0.3757	0.03170	2.360	56.65	-1.4	-9.8
6	2	1	25	6	5 ON	1290	0.3875	0.03270	2.435	58.44	-1.4	-10.5
					OFF	63	0.3978	0.03356	2.499	59.98	-1.4	-9.9
6	2	2	50	6	5 ON	1522	0.4233	0.03571	2.659	63.83	-1.4	-7.9
					OFF	117	0.4361	0.03680	2.740	65.76	-1.4	-6.6
7	8	1	99	6	5 ON	1234	0.3776	0.03186	2.373	56.94	-1.4	-11.6
					OFF	249	0.4176	0.03523	2.624	62.97	-1.4	-8.7
7	8	2	45	6	5 ON	1751	0.4451	0.03755	2.796	67.11	-1.4	-5.1
					OFF	100	0.4492	0.03790	2.822	67.73	-1.4	-3.6
8	5	1	85	6	5 ON	1244	0.3795	0.03202	2.384	57.22	-1.4	-6.1

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					OFF	213	0.4139	0.03493	2.601	62.42	-1.4	-5.1
9	5	0	12	6	5 ON	213	0.2589	0.02185	1.627	39.05	-1.4	-3.8
					OFF	47	0.2610	0.02202	1.640	39.35	-1.4	-4.6
10	2	1	60	6	5 ON	2265	0.4296	0.03625	2.699	64.78	-1.4	-1.0
					OFF	144	0.4108	0.03466	2.581	61.95	-1.4	0.5
11	4	1	30	6	5 ON	1874	0.4497	0.03795	2.826	67.82	-1.4	-4.0
					OFF	69	0.4500	0.03797	2.828	67.86	-1.4	-3.6
11	4	2	37	6	5 ON	2025	0.4481	0.03781	2.816	67.57	-1.4	-3.0
					OFF	84	0.4440	0.03746	2.789	66.95	-1.4	-2.3
16	5	0	16	6	5 ON	1717	0.4383	0.03698	2.754	66.09	-2.4	-4.8
					OFF	37	0.4404	0.03716	2.767	66.41	-2.4	-4.8
18	7	1	73	6	4 ON	1168	0.3634	0.03066	2.283	54.80	-2.4	-4.6
					OFF	189	0.4003	0.03378	2.515	60.37	-2.4	-2.3
22	1	1	65	6	4 ON	1464	0.4193	0.03538	2.635	63.23	-2.4	-1.4
					OFF	154	0.4402	0.03714	2.766	66.38	-2.4	-1.1
22	1	2	53	6	4 ON	1703	0.4491	0.03789	2.822	67.72	-2.4	-1.1
					OFF	118	0.4562	0.03850	2.867	68.80	-2.4	-1.3
22	1	3	31	6	4 ON	1964	0.4579	0.03864	2.877	69.05	-2.4	-1.6
					OFF	70	0.4558	0.03846	2.864	68.74	-2.4	-1.7
22	1	4	22	6	4 ON	2444	0.4077	0.03440	2.561	61.47	-2.4	-2.0
					OFF	56	0.3981	0.03359	2.502	60.04	-2.4	-1.9
23	8	1	65	6	4 ON	1461	0.4189	0.03535	2.632	63.17	-2.4	-1.5
					OFF	154	0.4399	0.03712	2.764	66.34	-2.4	-1.2
23	8	2	38	6	4 ON	1825	0.4565	0.03852	2.868	68.84	-2.4	-1.3
					OFF	84	0.4582	0.03867	2.879	69.10	-2.4	-1.5
24	6	1	102	6	4 ON	1417	0.4115	0.03472	2.586	62.05	-2.4	-1.6
					OFF	236	0.4440	0.03746	2.790	66.95	-2.4	-1.1
25	6	0	12	6	4 ON	299	0.2488	0.02099	1.563	37.52	-2.4	-9.7
					OFF	47	0.2519	0.02125	1.583	37.98	-2.4	-10.1
26	7	1	58	6	4 ON	2106	0.4421	0.03730	2.778	66.66	-4.4	-4.0
					OFF	131	0.4300	0.03628	2.702	64.84	-4.4	-4.0
26	7	2	117	6	4 ON	2347	0.4150	0.03501	2.607	62.57	-4.4	-4.2
					OFF	296	0.3621	0.03055	2.275	54.61	-4.4	-4.7
30	5	1	20	6	4 ON	1759	0.4439	0.03745	2.789	66.93	-4.4	-3.3
					OFF	47	0.4462	0.03765	2.804	67.28	-4.4	-3.4
30	5	2	24	6	4 ON	2025	0.4467	0.03769	2.806	67.35	-4.4	-3.8
					OFF	55	0.4440	0.03747	2.790	66.96	-4.4	-3.9
32	5	0	17	6	4 ON	1800	0.4461	0.03764	2.803	67.26	-4.4	-3.4
					OFF	38	0.4475	0.03776	2.811	67.47	-4.4	-3.5
39	2	1	24	5	4 ON	1486	0.4291	0.03620	2.696	64.70	-4.4	-0.2
					OFF	55	0.4366	0.03684	2.743	65.83	-4.4	-0.1
39	2	2	24	5	4 ON	1583	0.4424	0.03733	2.780	66.72	-4.4	0.1
					OFF	56	0.4485	0.03784	2.818	67.63	-4.4	0.1
40	3	1	31	5	4 ON	1477	0.4277	0.03609	2.688	64.50	-4.4	-0.0
					OFF	73	0.4378	0.03694	2.750	66.01	-4.4	0.1
40	3	2	21	5	4 ON	1592	0.4436	0.03743	2.787	66.89	-4.4	0.3
					OFF	47	0.4485	0.03785	2.818	67.64	-4.4	0.2
40	3	3	38	5	4 ON	1743	0.4578	0.03863	2.876	69.03	-4.4	0.2
					OFF	84	0.4621	0.03899	2.903	69.68	-4.4	0.0
41	3	0	14	5	4 ON	333	0.2610	0.02202	1.640	39.35	-4.4	-7.1
					OFF	47	0.2643	0.02230	1.661	39.85	-4.4	-7.5
48	4	0	17	5	4 ON	1834	0.4624	0.03902	2.906	69.73	-4.4	0.2
					OFF	38	0.4634	0.03910	2.911	69.87	-4.4	0.1
49	4	1	38	5	4 ON	1270	0.3914	0.03302	2.459	59.02	-4.4	-1.9
					OFF	93	0.4082	0.03445	2.565	61.56	-4.4	-1.0

52	5	1	24	5	4 ON	1721	0.4562	0.03849	2.866	68.80	-4.4	0.4
					OFF	55	0.4596	0.03878	2.888	69.31	-4.4	0.3
53	5	1	24	5	4 ON	1800	0.4611	0.03890	2.897	69.53	-4.4	0.3
					OFF	54	0.4629	0.03906	2.909	69.81	-4.4	0.2
53	5	2	65	5	4 ON	1907	0.4638	0.03914	2.914	69.94	-4.4	0.1
					OFF	146	0.4605	0.03886	2.894	69.45	-4.4	-0.1
54	5	1	155	5	4 ON	1666	0.4482	0.03782	2.816	67.59	-5.1	-0.4
					OFF	348	0.4588	0.03872	2.883	69.19	-5.1	-0.8
55	2	1	53	5	4 ON	1542	0.4339	0.03662	2.727	65.44	-5.1	-0.7
					OFF	120	0.4476	0.03776	2.812	67.49	-5.1	-0.5
55	2	2	21	5	4 ON	1701	0.4514	0.03808	2.836	68.06	-5.1	-0.4
					OFF	48	0.4547	0.03836	2.857	68.56	-5.1	-0.5
57	9	0	13	5	4 ON	369	0.2617	0.02208	1.644	39.46	-5.1	-9.3
					OFF	49	0.2654	0.02239	1.667	40.02	-5.1	-9.5
57	9	1	29	5	4 ON	1124	0.3593	0.03032	2.258	54.18	-5.1	-5.2
					OFF	78	0.3745	0.03160	2.353	56.47	-5.1	-4.0
57	9	2	49	5	4 ON	2293	0.4345	0.03666	2.730	65.52	-5.1	-1.2
					OFF	115	0.4180	0.03527	2.626	63.03	-5.1	-1.2
57	9	3	45	5	4 ON	2489	0.4034	0.03403	2.534	60.82	-5.1	-1.4
					OFF	114	0.3825	0.03227	2.403	57.67	-5.1	-1.5
58	3	1	78	5	4 ON	1899	0.4604	0.03885	2.893	69.42	-5.1	-0.5
					OFF	176	0.4560	0.03848	2.865	68.77	-5.1	-0.9
63	4	1	34	5	4 ON	1906	0.4604	0.03885	2.893	69.43	-5.1	-0.5
					OFF	77	0.4598	0.03879	2.889	69.33	-5.1	-0.7
65	5	1	33	5	4 ON	1360	0.4052	0.03419	2.546	61.10	-5.1	-2.0
					OFF	77	0.4177	0.03525	2.625	62.99	-5.1	-1.4
68	2	1	52	5	4 ON	1692	0.4505	0.03801	2.831	67.94	-5.1	-0.3
					OFF	118	0.4580	0.03864	2.878	69.06	-5.1	-0.4
70	3	1	24	5	4 ON	1810	0.4582	0.03866	2.879	69.09	-5.1	-0.3
					OFF	55	0.4598	0.03880	2.889	69.34	-5.1	-0.4
71	4	1	20	5	4 ON	1340	0.4022	0.03393	2.527	60.65	-4.9	-2.1
					OFF	50	0.4106	0.03464	2.580	61.91	-4.9	-1.7
71	4	2	31	5	4 ON	1625	0.4448	0.03753	2.795	67.08	-4.9	-0.2
					OFF	71	0.4514	0.03809	2.836	68.08	-4.9	-0.2
71	4	3	24	5	4 ON	1736	0.4548	0.03837	2.857	68.58	-4.9	-0.1
					OFF	55	0.4579	0.03864	2.877	69.05	-4.9	-0.2
71	4	4	59	5	4 ON	1883	0.4610	0.03890	2.896	69.51	-4.9	-0.3
					OFF	131	0.4596	0.03878	2.888	69.31	-4.9	-0.5
72	9	1	35	5	4 ON	1579	0.4394	0.03708	2.761	66.26	-4.9	-0.3
					OFF	79	0.4479	0.03779	2.814	67.54	-4.9	-0.2
72	9	2	56	5	4 ON	1694	0.4515	0.03809	2.837	68.08	-4.9	-0.1
					OFF	125	0.4591	0.03874	2.885	69.24	-4.9	-0.2
73	6	1	70	5	4 ON	2464	0.4085	0.03447	2.567	61.61	-4.9	-1.3
					OFF	175	0.3760	0.03172	2.362	56.70	-4.9	-1.7
75	2	1	24	5	4 ON	1457	0.4222	0.03562	2.653	63.66	-4.9	-1.0
					OFF	57	0.4303	0.03631	2.704	64.89	-4.9	-0.7
79	3	1	33	5	4 ON	1947	0.4611	0.03891	2.897	69.53	-4.9	-0.3
					OFF	69	0.4596	0.03878	2.888	69.30	-4.9	-0.4
84	8	1	47	5	4 ON	1635	0.4459	0.03762	2.802	67.24	-4.9	1.7
					OFF	106	0.4549	0.03838	2.858	68.60	-4.9	1.3
84	8	2	54	5	4 ON	1830	0.4597	0.03879	2.888	69.32	-4.9	0.8
					OFF	119	0.4611	0.03891	2.897	69.53	-4.9	-0.1
85	8	1	73	5	4 ON	1973	0.4607	0.03887	2.895	69.47	-4.9	-0.3
					OFF	162	0.4526	0.03819	2.844	68.25	-4.9	-1.7
86	2	1	24	5	4 ON	1933	0.4612	0.03892	2.898	69.55	-4.9	0.0

NO [redacted]

					OFF	54	0.4604	0.03885	2.893	69.43	-4.9	-0.4
86	2	2	34	5	4 ON	2093	0.4554	0.03843	2.861	68.68	-4.9	-1.4
					OFF	77	0.4495	0.03793	2.824	67.78	-4.9	-2.1
86	2	3	24	5	4 ON	2470	0.4074	0.03438	2.560	61.44	-4.9	-4.9
					OFF	61	0.3969	0.03349	2.494	59.84	-4.9	-5.2
87	7	1	21	5	4 ON	1464	0.4233	0.03572	2.660	63.83	-4.9	1.5
					OFF	51	0.4304	0.03632	2.705	64.91	-4.9	1.6
87	7	2	103	5	4 ON	1710	0.4528	0.03820	2.845	68.28	-4.9	1.6
					OFF	230	0.4612	0.03891	2.898	69.54	-4.9	-0.0
88	5	1	55	5	4 ON	1643	0.4467	0.03769	2.807	67.36	-4.9	1.7
					OFF	123	0.4565	0.03852	2.868	68.84	-4.9	1.2
95	7	0	16	5	4 ON	2014	0.4595	0.03877	2.887	69.29	-4.9	-0.7
					OFF	39	0.4580	0.03864	2.877	69.06	-4.9	-1.1

RAMP PROFILE
R- 6 A- 5 PERIOD= 3840
R= 0.3587 A= C.1CC6

TUR	PER	CPS	ANG V
-0	3.874	0.2581	C.02334
100	3.859	0.2591	C.02344
200	3.814	0.2622	C.02371
300	3.742	0.2672	C.02417
400	3.648	0.2742	C.02480
500	3.536	0.2828	C.02558
600	3.413	0.293C	C.02650
700	3.284	0.3045	C.02754
800	3.153	0.3172	C.02869
900	3.024	0.33C7	C.02991
1000	2.901	0.3448	C.03118
1100	2.784	0.3592	C.03249
1200	2.643	0.3783	C.03422
1300	2.521	0.3967	C.03588
1400	2.417	0.4137	C.03741
1500	2.333	0.4287	C.03877
1600	2.267	C.4411	C.03990
1700	2.219	0.4506	C.04075
1800	2.190	0.4567	C.04130
1900	2.178	0.4592	C.04153
2000	2.183	0.4581	C.04144
2100	2.205	0.4534	C.04101
2200	2.246	0.4453	C.04027
2300	2.304	C.434C	C.03925
2400	2.381	0.4199	C.03798
2500	2.477	0.4037	C.03651
2600	2.592	C.3858	C.03489
2700	2.725	0.3669	C.03319
2800	2.853	0.35C5	C.03170
2900	2.974	0.3363	C.03041
3000	3.1C1	0.3225	C.02917
3100	3.231	0.3095	C.02799
3200	3.362	0.2975	C.02690
3300	3.488	0.2867	C.02593
3400	3.605	0.2774	C.02509
3500	3.707	0.2698	C.02440
3600	3.788	0.264C	C.02388

[redacted]
NO [redacted]

3700	3.844	0.2601	0.02353
3800	3.872	0.2583	0.02336

RAMP PROFILE
R- 6 A- 4 PERIOD= 3840
R= 0.3587 A= C.1139

TUR	PER	CPS	ANG V
-0	4.085	0.2448	C.02214
100	4.066	0.2460	C.02225
200	4.009	0.2494	C.02256
300	3.919	0.2551	0.02308
400	3.803	0.2630	0.02378
500	3.666	0.2728	C.02467
600	3.517	0.2843	C.02571
700	3.363	0.2974	0.02690
800	3.208	0.3117	C.02819
900	3.058	0.3270	C.02957
1000	2.916	0.3429	C.03101
1100	2.783	0.3593	C.03250
1200	2.625	0.3809	C.03445
1300	2.489	0.4017	C.03633
1400	2.376	0.4209	C.03807
1500	2.284	0.4379	C.03961
1600	2.212	0.4520	C.04088
1700	2.161	0.4627	C.04185
1800	2.129	0.4696	C.04248
1900	2.116	0.4725	0.04274
2000	2.122	0.4713	C.04262
2100	2.146	0.4659	0.04214
2200	2.190	0.4567	C.04131
2300	2.253	0.4439	C.04015
2400	2.336	0.4280	C.03871
2500	2.441	0.4096	C.03705
2600	2.568	0.3894	C.03522
2700	2.717	0.3680	C.03328
2800	2.862	0.3494	C.03160
2900	3.000	0.3333	C.03014
3000	3.148	0.3177	0.02874
3100	3.301	0.3030	C.02740
3200	3.456	0.2894	C.02617
3300	3.608	0.2772	C.02507
3400	3.750	0.2667	C.02412
3500	3.876	0.2580	C.02334
3600	3.977	0.2515	C.02274
3700	4.047	0.2471	C.02235
3800	4.082	0.2450	C.02216

RAMP PROFILE
R- 5 A- 4 PERIOD= 3840
R= 0.3746 A= C.1139

TUR	PER	CPS	ANG V
-0	3.836	0.2607	C.02358
100	3.819	0.2619	C.02368
200	3.769	0.2653	C.02400
300	3.689	0.2710	C.02451

400	3.586	0.2789	0.02522
500	3.464	0.2887	0.02611
600	3.331	0.3002	0.02715
700	3.192	0.3133	0.02833
800	3.053	0.3276	0.02963
900	2.917	0.3429	0.03101
1000	2.787	0.3588	0.03245
1100	2.665	0.3752	0.03394
1200	2.520	0.3968	0.03589
1300	2.395	0.4176	0.03777
1400	2.289	0.4368	0.03951
1500	2.204	0.4538	0.04104
1600	2.137	0.4679	0.04232
1700	2.089	0.4786	0.04329
1800	2.060	0.4855	0.04391
1900	2.047	0.4884	0.04417
2000	2.053	0.4872	0.04406
2100	2.075	0.4818	0.04358
2200	2.116	0.4726	0.04275
2300	2.175	0.4598	0.04159
2400	2.253	0.4439	0.04015
2500	2.350	0.4255	0.03849
2600	2.467	0.4053	0.03666
2700	2.605	0.3839	0.03472
2800	2.738	0.3653	0.03304
2900	2.864	0.3492	0.03158
3000	2.998	0.3336	0.03017
3100	3.136	0.3189	0.02884
3200	3.276	0.3053	0.02761
3300	3.412	0.2931	0.02651
3400	3.539	0.2826	0.02556
3500	3.651	0.2739	0.02478
3600	3.740	0.2674	0.02418
3700	3.803	0.2630	0.02379
3800	3.833	0.2609	0.02360

CLOCK SUMMARY
PRELIMINARY CLOCK CORRELATION
ORDER FIT 1

SYS TIME I/P	CL TIME I/P	COMP SYS TM	DELTA ST	REV	STA
60023.058	77883.51090	60023.06100	-0.00209	0	1
39989.467	144249.92990	39989.46600	0.00191	9	1
79186.582	183447.05790	79186.58580	-0.00283	16	1
39811.258	230471.74090	39811.25890	0.00009	25	1
79019.317	269679.80890	79019.31860	-0.00064	32	1
39634.097	316694.59490	39634.09470	0.00327	41	1
78825.148	355885.65690	78825.14840	0.00054	48	1
39423.947	402884.46890	39423.95050	-0.00255	57	1
73309.930	436770.45290	73309.92740	0.00359	63	1
33615.817	483476.35090	33615.81550	0.00244	72	1
72882.594	522743.13990	72882.59520	-0.00028	79	1
33544.997	32934.63590	33544.99430	0.00365	88	1
72687.902	72077.55990	72687.91000	-0.00710	95	1

A0=-0.17860433490 05 A1= 0.99999978912 3D 00
SIGMA=0.00289 NO. POINTS= 13

[redacted]